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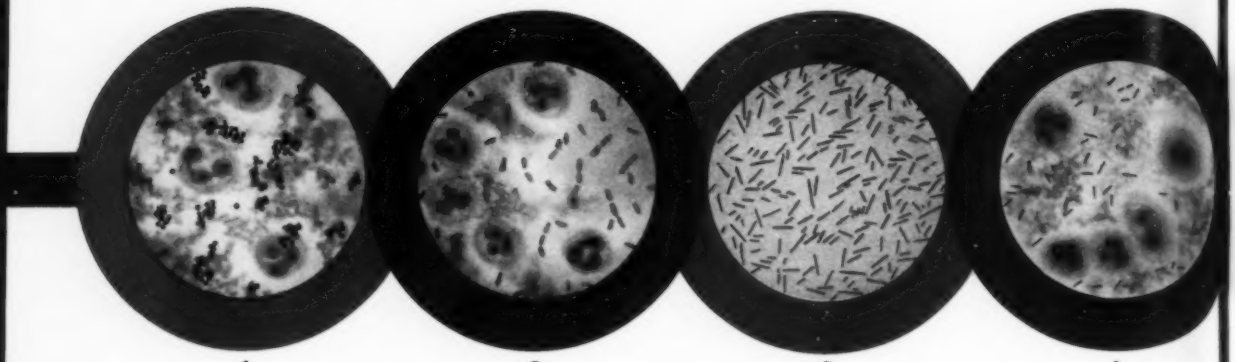

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CHLOROMYCETIN is a potent therapeutic agent, and because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

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Editorials

The Forand Bill

This bill now in Congress would provide hospital and medical care for the people covered by social security. The American Medical Association opposes this bill, for it is not in the public interest. It was sponsored by the AFL-CIO which is quite consistent with their line of thinking about health problems.

The A.M.A.'s line is a traditional one but this time there is a difference and a very notable difference. This time the A.M.A. recognizes the existence of a problem and there appears to be a problem with the health care of the aged. There is a need for a solution and the A.M.A. proposes to help solve it. There is to be a positive approach. It may be difficult for the membership to accept a positive program—it is too easy and too satisfactory for those who feel secure in their own personal following to want things to remain unchanged. It should, however, for the most part win friends, for it acknowledges the existence of a need and offers to help solve the problem imposed by that need. This is a long way from the usual immediate condemnation of anything that smells like socialized medicine.

No official word has come down as to just what the line of approach to the problem will be. On July 1, 1958, Public Law 880 which provides for assistance in the medical care of people in the four categories of dependence on the Public Welfare departments will have been in effect a year. A great deal of valuable information should be available then, concerning the degree and kind of utilization necessary for the old age group. Any bill as all encompassing as the Forand bill is quite premature if experience is to be of any value. Surely the Congress doesn't need to move that fast even in election year.

A Guess About the Program

It is rumored that the A.M.A. will seek the advice and help of the insurance companies and Blue Cross-Blue Shield in developing a program for solving the medical problems of the in-between old folks. They are not poor enough to be dependent but not rich enough to provide medical and hospital care when that care is considerable. It is difficult to see how these people can be properly categorized. Perhaps if the OSIA paid the necessary premiums or contract cost on all people who made the state their legatee, the categorization would be automatic, for surely the family would pay the necessary cost if the estate was of value and if they were able. There are, of course, always a few of those avaricious unfeeling people who would see that the property was transferred prematurely.

Strange Bed Fellows

The original philosophy behind Blue Cross-Blue Shield is not the same as the philosophy behind the insurance carrier. It is doubtful whether these two can be harnessed together as a team without corrupting the philosophy of the former. It may end up supplying a substantial profit for both which would represent, of course, a superimposed cost on the already high cost of hospital and medical care.

The necessity for trying to harness the two together is not clear. It must stem from a desire to affirm medicine's belief in free enterprise, and perhaps to acknowledge the profession's and the hospital's debt to insurance companies for their help with the traumatically injured.

The concept of *free enterprise* is not abrogated by Blue Cross-Blue Shield if one accepts the thesis that the enterprise is not insurance but medical care and hospital care. Admittedly the cost of medical care is high in dollars and cents, in the sense that it is not cheap, not in the sense that it is unreasonable. To add to this cost a profit for hundreds of insurance companies a living for thousands of their employees is not really very sensible.

A Child of Its Own Creation

While the A.M.A. initially opposed Blue Cross, it is in reality a child of the profession's own creation. It is true that it was conceived at Baylor Hospital in Dallas but it was really delivered to something of importance by members of the profession and by hospitals. Blue Shield is strictly the profession's own baby. It was to be and has been thus far, the profession's answer to those crying for the socialization of medicine. If we were not sincere in its establishment, there is little hope for us anyway. If we were sincere and find it faulty let's get busy on the faults. It doesn't ring true to divide our loyalty and our interest. Surely we can back our own child without feeding and clothing and educating the neighborhood. The only people who could be critical would be those who have some type of vested interest that would be jeopardized. So what?

There may be some difference in the philosophy of the various Blue Cross-Blue Shield plans over the country but that of the Oklahoma plan would be ideal for bargaining purposes at a high level of social consciousness. This is best brought out by its 18 year behavioral pattern.

1. It pays hospital bills not dollars.
2. It desires to pay doctors' bills (service contract rather than dollars).
3. It has always offered coverage for the entire family.
4. It permits the retired worker to continue his contract.
5. It does not cancel the contract for conditions that arise after the contract was accepted—only a waiver for those conditions which pre-existed.
6. It offers a real protection against catastrophic illness which is not limited by number of dollars in the matter of hospitalization.
7. It has consistently and regularly extended benefits when possible.
8. It has willingly negotiated with hospitals for changes in contractural arrangements made necessary by increasing costs.
9. It willingly sits down with the doctors to reevaluate items on the schedule of fees.—*BHN.*

Prize Offered For Case Report of House Officer

The *Journal* offers a prize of $100 for the best paper or case report submitted by a house officer from one of the Oklahoma hospitals in 1958. There are only two stipulations:

1. At least 10 must be received during the year and if not, the time will be extended until that many have been submitted.

2. The paper must be received not later than six months after his tour of duty as a house officer at that hospital has ended.

Scientific Articles

Proceedings

of the September 1957 Meeting of the University of Oklahoma Arthritis Study Group

SUBJECT: DERMATOMYOSITIS

ESSAYIST: Robert Johnson. M.D.
Resident, Bone and Joint Hospital, Orthopaedic Surgery

PRESIDING: Wm. K. Ishmael, M.D., Associate Professor of Medicine

DR. ISHMAEL: The subject of dermatomyositis was chosen for discussion this evening because it is probably the most frequently overlooked of the "Collagen diseases."

The disease under discussion is also known as polymyositis, dermatomucomyositis, pseudotrichinosis, neuromyositis, dermatoneuromyositis and angiomyositis. This condition was probably first described by Wagoner in 1887. Some twenty-five years earlier he had recorded a patient with acute polymyositis but it is felt that the patient in this earlier report had trichinosis. Hepp and Unverricht also reported cases of dermatomyositis in 1887. It was three years later that Unverricht proposed the term "dermatomyositis" which is still the preferred name. This disease undoubtedly occurs more frequently than it is diagnosed. One suspects dermatomyositis in the patient diagnosed as having rheumatic fever and whose fever, malaise and muscular complaints do not respond to penicillin and salicylates, or, in the patient suspected of having diffuse scleroderma whose edema is greater than it should be and whose inability to use his extremities is caused by weakness rather than by myofascial stiffness or neurological changes. Dermatomyositis must also be suspected in the patient with rheumatoid-arthritis-like deformities who is unable to place his arms over his head without great effort in spite of the absence of humeroscapular involvement.

Doctor Robert Johnson will present the case history of a patient with dermatomyositis and whose response during treatment merits our consideration.

DR. JOHNSON: A seventy-five year old white female was admitted to the arthritis department of the McBride Clinic on February 27, 1957 complaining of pain in the hips, knees, feet and shoulders of approximately two weeks duration. Six weeks prior to admission she had noted the insidious onset of heaviness and "doughiness" of the lower extremities, accompanied by weakness and paresthesias. These symptoms were aggravated by prolonged standing. Massage and exercise seemed to exaggerate the condition. One week prior to admission the patient noted the development of an erythematous rash over the upper anterior chest. A prominent feature of her illness had been easy fatigability and a moderate degree of morning stiffness. She denied chills, fever, or symptoms of recent infectious processes.

The systemic and past history were noncontributory and related nothing suggestive of a neoplasm. The physical examination revealed an alert, cooperative, fairly well developed, well nourished white female of approximately the stated age. She appeared chronically ill. The blood pressure was 150/80 mm of mercury; weight 150 lbs.; height 5'5"; pulse 120 min.; oral temperature 98.2 degrees F. An elevated, dry, violaceous rash was present over the forehead and upper sternal area. No palpebral edema was present on the initial examination. The thorax was symmetrical with equal expansion bilaterally. The breasts were atrophic and contained no masses. The heart and lungs were normal. The abdomen was flat and normal to palpation. The pelvic and rectal examinations were negative. A moderate degree of brawny induration without

evidence of pitting edema was present over the extremities. There was marked motor weakness of various muscle groups, particularly the flexors of the neck, the muscles of the shoulder girdle, and quadriceps group of the thighs. The involved muscles were tender to palpation. The deep tendon reflexes were absent throughout. No pathological reflexes were obtained. The sensorium was normal. There was no evidence of joint inflammation or effusion.

The admission laboratory examination revealed a normal hemogram. The erythrocyte sedimentation rate was 58-mm per hour (Westergren). Urinalysis revealed the presence of pyuria. The antistreptolysin O titer, latex fixation test, and LE preparations were all negative. The total serum protein was 5.6 gms per cent, with 3.6 gms per cent of albumin and 2.0 gms per cent of globulin. A 24-hour urine creatine excretion on admission was 58-mgs (Normal 0-100); this determination was repeated one month after admission at which time it was 194 mgs. The electrocardiogram was normal. Roentgenograms on admission revealed diffuse demineralization of bone, pulmonary congestion and slight cardiomegaly.

Course: The initial treatment consisted of Vitamin B-12 intramuscularly, intravenous fluids, Sparine, and infusion of ACTH, using 15 to 20 units of ACTH to 500-cc of 5 per cent glucose in water. Physical therapy was initiated but increased the patient's pain and soreness, therefore, this was discontinued. Pitting edema of the extremities appeared. Dysphagia developed; prostration increased to the point of her being unable to turn over in bed. The voice became quite weak.

One month after admission to the hospital hepatomegaly appeared and the

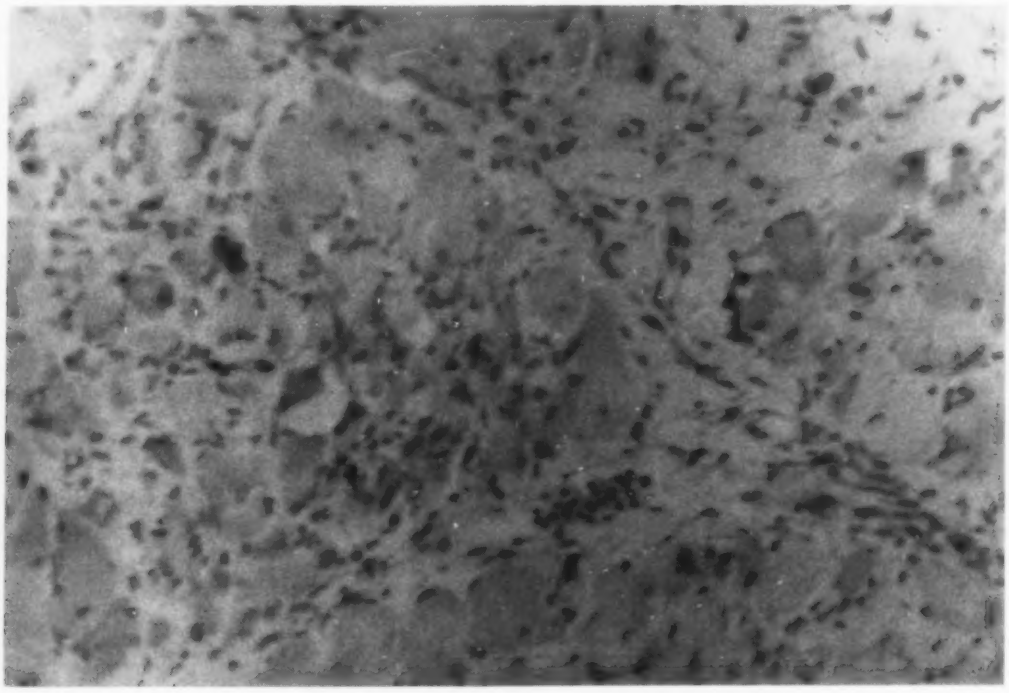

Figure 1

The microscopic picture, shown in Figure 1, taken during the active phase of the disease, shows edema by separation of the fibers. Proliferation of the sarcolemma cells is very prominent with minimal round cell infiltration. There are a few small collections of polymorphonuclear leucocytes to be seen about several of the smaller venules. There is a loss of striation in the muscle fibers found in this preparation. The muscle fibers shown are homogenous and irregular in size as well as in shape.

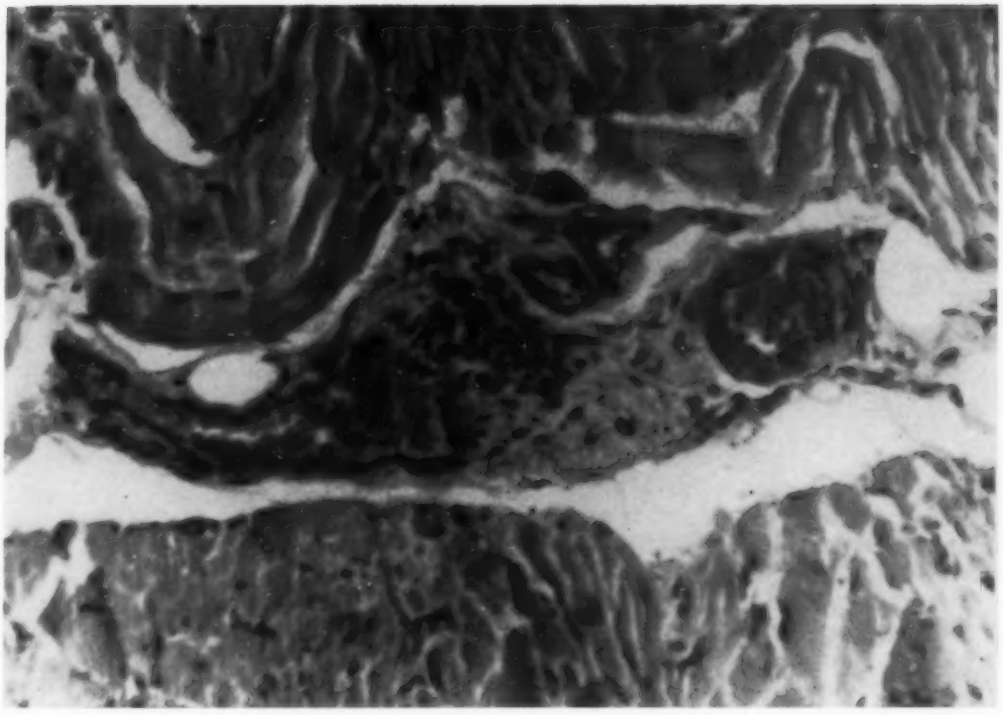

Figure 2

The microscopic picture, shown in Figure 2, shows the more normal appearance of the muscle fibers. No sarcolemmal proliferation is to be made out. No edema, or sepaation of the fibers can be seen. There is one small area of lymphocytic infiltration to be seen about one small vein which is the only evidence of the disease at this time.

brawny edema of the extremities became more extensive and palpebral edema appeared. The total serum protein had dropped from 4.8 gms per cent and the A/G ratio was 2.55/2.25. The hemogram and urinalysis remained normal. A specimen of the skin and underlying right pectoralis major muscle was obtained. Microscopic examination of the muscle tissue revealed changes characteristic of dermatomyositis (Figure 1).

The patient was given 100-mgs of Testosterone, intramuscularly, every other day for five days, following which subjective improvement was noted. She was then discharged from the hospital on Testosterone Propionate, 10-mgs daily, trans-buccally. During the patient's hospital stay she remained afebrile.

On April 21, 1957 the patient was readmitted to the hospital for further observation, after being home for approximately three weeks. She had noted a moderate degree of improvement in the function of the lower extremities and showed a decrease in the edema of her face and neck. The serum albumin was still low with an A/G ratio of 2/2. At this time it was decided to change from androgens to estrogens and to give Releasin.® She was given Estinyl, 0.05 mgs, three times daily, orally and Releasin, 1-cc daily, intramuscularly. The patient improved during Releasin therapy. The edema lessened. She was able to sit up on her bed and generalized pain was reduced. There was a diminution in the erythematous rash about the face, forehead and neck. Her chief complaint at this time was inability to swallow and her weakness.

One month following the second admission, while still receiving daily Releasin, her

condition regressed, requiring tube feeding and intravenous fluids. On July 25, 1957, approximately three months following the second admission, intravenous nitrogen mustard therapy was initiated. The procedure consisted of first giving 50-mgs of Sparine intramuscularly and then administering 10 units of ACTH, in 1,000-cc of five per cent glucose in water, by slow intravenous drip. Thirty minutes after the ATCH drip was started, 2-mgs of nitrogen mustard was given intravenously. The drip was then continued for an additional four hours. The procedure was repeated at 48 hour intervals for a total of three treatments. The Releasin and estrogen therapy was discontinued.

One week following the initiation of nitrogen mustard therapy the patient showed dramatic improvement. This was characterized by increased spontaneity, increase in strength, and a return of her appetite and ability to swallow. One month following the administration of nitrogen mustard the patient was eating well, gaining strength and tolerating physical therapy. She manifested an increasing ability to feed and turn herself in bed. It was also noted that her mood had been considerably elevated. Within two months she was able to walk between parallel bars. This was the first time that she had been able to do this since the onset of her illness.

To date this patient has progressively improved. A repeat muscle biopsy of the right pectoralis muscle revealed normal muscle tissues (Figure 2). The erythematous rash completely subsided following the nitrogen mustard therapy. The patient has had no complicating associated conditions. A repeat chest roentgenogram revealed that the previously described cardiomegaly had subsided. The deep tendon reflexes continued to remain absent. Upon dismissal from the hospital, nine months from the time she was originally seen, and four months following nitrogen mustard therapy, she was walking unassisted.

DR. ISHMAEL: Thank you, Doctor Johnson, for giving us this most interesting case history. Doctor Mary Duffy Honick will now discuss the clinical manifestations of dermatomyositis.

DR. MARY DUFFY HONICK (Clinical Instructor in Medicine): This patient, under discussion, presents the protean manifestations of any of the collagen disorders, be it rheumatic fever, periarteritis nodosum, systemic lupus erythematosus, scleroderma or rheumatoid arthritis. The peak incidence of dermatomyositis in adults occurs in the fourth and fifth decades. However, cases have been reported in the early seventies. The skin lesion is raised, beefy, or violet-red, occurring most often over the trunk but frequently in the blush areas. These are accessible for biopsies of skin, subcutaneous tissues, and muscle which may be diagnostic. Respiratory difficulties are often characterized by difficulty with ventilation rather than pleuritic pain, with spiking fever as may characterize lupus erythematosus. Repeated negative L.E. preps aid in making this differentiation early. Several series report classical mitral stenosis with polyarticular migratory arthritis indistinguishable from rheumatic fever. However, persistent, severe malaise and muscle weakness in the face of adequate antibiotic and salicylate therapy indicate consideration of dermatomyositis. Disturbances in rhythm and heart blocks are the result of cardiac muscle infiltration by the disease process. A clinical diagnosis of rheumatoid arthritis is more apt to be entertained if articular swelling and pain persist.

This seventy year old woman did have peripheral joint involvement of this caliber. The most characteristic feature of dermatomyositis is the selective involvement of muscles which produces tenderness to palpation, gradually increasing weakness and "doughy-like" consistency to the muscle belly. Very often the shoulder muscles are involved early in the course of dermatomyositis and the patient is unable to elevate the arms above the head. This finding is of importance since rheumatoid arthritis characteristically involves the scapulohumeral joints late in its course. Swallowing was so painful for this patient that a severe state of inanition resulted. Dysphagia in dermatomyositis results from muscle involvement and not the elastic tissue changes noted in

patients with scleroderma, who have an involvement in the gastro-intestinal tract.

The association of dermatomyositis with neoplasm must be borne in mind, especially in the older age group. No manifestations of tumor were apparent in this patient during her nine months of observation. This patient, during the course of her illness, presented the stigmata of dermatomyositis by manifesting edema, muscle soreness and weakness, articular joint phenomena, cardiac arrhythmia with block, esophagitis and malnutrition. The diagnosis was confirmed by biopsy.

DR. ISHMAEL: Thank you, Doctor Hodnick, for your discussion of the general clinical picture of this disease. I will now call on Doctor Arthur Hellbaum to discuss the drugs used on this patient.

DR. ARTHUR HELLBAUM (Professor of Pharmacology): The treatment of dermatomyositis has been unsatisfactory. In many instances salicylates and analgesics do not relieve the muscular symptoms. Spontaneous remissions which may last for a number of years makes evaluation of treatment uncertain. Remissions apparently have been induced following administration of ACTH, or cortisone, and other glucocorticoid derivatives. However, the patients usually relapse promptly following withdrawal of these hormonal preparations. Testosterone has been used on an empirical basis because of its favorable effect on protein metabolism and sustained remissions have occurred but the evidence of its value is equivocal and cannot be classified as more than a clinical impression. Relaxin (Releasin®) was used for a period of time in this patient. Releasin is a polypeptide-like substance, secreted by the ovary, and it is concerned with the ground substance in connective tissue metabolism. It was first recognized as inducing alterations in connective tissue in the pubic symphysis of rodents and it is known to influence changes in the cervix of women at the time of parturition. Because of its known effects on connective tissue, Doctors Caston, Boucek, and their collaborators, of Miami, Florida, began using Releasin in patients with scleroderma and have treated a number of patients with this condition over prolonged periods with gratifying results. Since dermatomyositis is considered by some to be a related collagen disease, Releasin was administered to this patient. The Miami investigators found that estrogen was essential in order for Releasin to be effective, consequently the administration of androgen in this patient was discontinued and estrogen begun.

During the past five years, Scherbel, Harrison and collaborators, at the Cleveland Clinic, have been administering nitrogen mustard (Mustargen) in combination with aqueous ACTH, by slow drip infusion, with gratifying results to patients with severe acute rheumatoid arthritis, and in patients with various types of collagen diseases. We have used their procedure in a number of patients with severe rheumatoid arthritis and the results have been promising, but this was the first patient with dermatomyositis receiving this type of therapy.

DR. ISHMAEL: Thank you, Doctor Hellbaum, for your discussion of the drugs used in this patient. It is necessary, in most instances, to have pathological confirmation before the diagnosis of dermatomyositis may be made. Doctor J. N. Owens, Jr., will now discuss some pathological aspects of the disorder under discussion.

DR. J. N. OWENS, Jr., (Assistant Professor of Pathology): It is usually necessary to have pathological confirmation in patients suspected of having dermatomyositis. The first important feature in pathological diagnosis of dermatomyositis is to select an involved area for biopsy. A review of cases in which biopsies were done reveals that there has been a higher incidence of positive findings in the muscles of the shoulder girdle, e.g., pectoralis major, or deltoid muscles. Skin should also be included in the tissue specimens, in order to help rule out other collagen fiber diseases, e.g., scleroderma, periarteritis nodosa, etc.

There is little consistency of findings, either in skin or muscle tissue in these patients since lesions may change as the disease progresses. One should not hesitate to repeat the biopsy if the clinical picture warrants. The skin changes most commonly

seen are described as being pale and atrophic, and rather thin. There may be localized areas of increased vascularity and/or edema with white painful swelling, which usually does not pit with pressure.

The gross appearance of the muscle fibers, as seen in dermatomyositis, may vary widely from normal brownish-red, rather firm, rubbery consistency to an edematous brownish-yellow, or tan soft elastic tissue. The cut edges roll on the knife and the individual fibers and fiber bundles are, as a rule, obliterated and usually obscured due to the edema.

Microscopic changes described in the skin are atrophy of the epidermis, a few water-clear cells are frequently found in the germinal layer of the epidermis, and some plugging of the skin appendages may also be found. There is usually some round cell infiltration about the blood vessels in the corium. Some degenerative changes can be found in the deeper layers of the dermis, especially those adjacent to the epidermis, and usually consist of hyalinization changes in the connective tissue. These changes are seen in more pink staining, connective tissue fibers in the dermis. In acute phases some polymorphonuclear infiltration may be found, especially in the areas about skin appendages, as well as about many of the smaller arterioles and venules.

Changes found in the muscle areas are characterized by proliferation of sarcolemma, marked edema, as evidenced by amorphous staining material between the muscle fibers. There is also a loss of striation. Some fibroblastic proliferation and degeneration of muscle fibers and collections of polymorphonuclear leucocytes are usually in evidence about the periphery of the degenerating muscle areas and about many of the blood vessels, being slightly more prominent about the venules than about the arterioles. The older lesions show proliferation of sacrolemma and round cell proliferation, usually of lymphocytic character. The older the lesion the more prominent may be the amount of fibroblastic tissue present. The changes in the connective tissue may be a result of edema, as well as the round cell infiltration. Loss of fibrillation and hyalinization of fibers, as well as a decrease in the size of nuclei, hardness of chromatin network in the nuclei, lack of mitotic figures are all evidence of the chronicity of these changes.

DR. ISHMAEL: Thank you, Doctor Owens, for your report on the pathological aspects of this disease. Doctor Payne would you please conclude this discussion?

DR. RICHARD PAYNE (Associate Professor of Pharmacology and Instructor in Medicine): Dermatomyositis certainly is an "odd" disease even among its peculiar cousins involving ground substance. Consider the high incidence of neoplasms in these patients and the improvement of the dermatomyositis after removal of the neoplasm. Is this the "missing link?" I am intrigued by the improvement of this patient after treatment with nitrogen mustard, a powerful cytotoxic agent. The devastating muscle atrophy, without demonstrable neurologic lesions is noteworthy though this is often superficially masked by edema. To my eye the muscle and joint deformities appearing with dermatomyositis are only casually similar to rheumatoid arthritis. There may be muscle atrophy with both diseases but the characteristic joint deformities of rheumatoid arthritis would certainly not be expected with dermatomyositis.

The advanced age of this patient is of considerable interest, particularly in view of the fact that one should not expect to see such rapid progression of the disease in this age group. In general, the juvenile variety of the disease is more characteristically fulminating.

I am greatly impressed by the response of this patient to nitrogen mustard, yet, would like to point out the notorious propensity of dermatomyositis to wide swings between exacerbation and remission, the short period of follow-up and the rather small series of patient studied.

Robert Johnson, M.D.
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TRANSURETHRAL URETEROLITHOTOMY

BERGET H. BLOCKSOM, M.D. and MAXWELL A. JOHNSON, M.D.

The operation of transurethral ureterolithotomy consists of transurethral resection of the intramural portion of the ureter (with or without including the ureteral orifice itself) employing the cutting current. The purpose of the procedure is to uncover and extract a calculus at or near the lower end of the ureter. We had used this procedure for several years without being aware that Katner and Schneiderman[1] of Canada and, later, Davis, Lee and Davis,[2] of this country, were likewise using the same method. We feel certain that many urologists have found occasion to use this procedure without reporting it (Figure 1).

Although some of our colleagues are content to wait for spontaneous passage of a stone, even though this may involve months of intermittent ureteral colic with more or less debilitation, we have found the pressure to be on us to settle the issue if the stone does not pass within a few days. Our patients, as a rule, cannot be pacified with the assurance that although the stone may pass at any time we cannot guarantee that "lightning" might not strike during an important business conference or even perhaps, a social event. Adding to this those patients in whom chills, fever, anuria and other compelling reasons for immediate relief of ureteral obstruction due to stones are superadded, it behooves us to attach some importance to the subject. In fact the "wait and see contingent" must be as hard pressed in selecting their cases to fit their philosophical approach as their more impetuous opposite numbers.

Figure 1

We have all been taught that once a stone starts down a ureter it tends to be arrested in one of the two physiological narrowings; namely where the ureter crosses the iliac vessels and at, or in, the intramural portion of the ureter. Of these, the latter is by far more common because here the tube is narrower, longer and more rigid. Most stones will eventually reach this portion of the ureter. Those which become arrested higher than the bony pelvis, and which constitute a menace to the well-being of the patient, should be removed by open surgery. Those which lie within the pelvic regions of the ureter, above the ureterovesical junction, and no larger than 1 cm. in diameter, may be subjected to endoscopic manipulation employing one of the many methods known to urologists. We favor the Balkus loop. Unfortunately any ureteral instrumentation in

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Maxwell A. Johnson, M.D., graduated from the University of Chicago School of Medicine in 1943 and his specialty is urology. He is certified by the American Board of Urology.

Doctor Johnson is President-Elect of the Oklahoma Urological Association. He is a member of the American Urological Association, the American College of Surgeons, Southwestern Surgical Congress, and the American Association Railway Surgeons.

Figure 2—Case #1, Original pyelogram showing stone lower ureter

such cases is prone to failure. Superimposed infection and, most horrible of all, irreparable damage to the ureter with ultimate loss of a kidney, not to mention prolonged morbidity, occasionally can follow. We have great respect for the problem presented by ureteral calculi no matter what one's attitude may be toward management of these patients.

Ratner and Schneiderman, who presented the original paper on this subject, studied the length of the intramural portion of the ureter in autopsy specimens. They concluded that it varied from 1.5 to 2.0 cm. and that this length constituted the margin of safety for ureterovesical resection. McDonald[3] reported a method of endoscopic resection for detachment of the ureter preparatory to complete nephro-ureterectomy. Using McDonald's technique we were surprised to see how much resection was necessary to disrupt the ureter at the vesical junction. This observation encouraged us to attempt to extract stones higher in the vesical portion of the ureter than we originally thought would be safe.

In selecting suitable cases the most important criterion must be the knowledge that there is a stone in the lower end of the ureter and that a definite bulge can be seen within one to 2 cm. of the ureteral orifice upon cystoscopy. Where the stone is non-opaque to X-ray the point at which the intravenous dye terminates in a dilated ureter, as seen on pyelogram, can be an important guide. Ratner and Schneiderman add another indication; that it must be impossible to pass the stone with conventional stone dislodgers. This indication we would ignore in many cases where the presence of the stone is obviously optimal for resection because the stone might be pushed out of reach. Further, we believe that instrumentation, however judiciously employed, is more traumatic than resection. The other alternative of open surgery will most often

Figure 3—Case #1, Stone pushed back to renal pelvis

require a transcystic approach with much greater morbidity and prolonged hospital stay.

Among our cases we have chosen a few to illustrate the points which we hope to make:

Case No. 1. This patient was a young adult female with typical left renal colic. Figure 2 shows the original intravenous urogram which demonstrated the stone lying near the ureterovesical junction. Figure 3 shows what happened when her local physician attempted to remove the stone with a ureteral instrument to the renal pelvis and pushed the stone back. She arrived in Tulsa with a catheter in place in the ureter. The next film (Figure 4) was taken two days after the catheter had been removed demonstrating that the stone had returned to its original location. At operation the bulge in the intramural portion of the ureter appeared to be about 1 cm. proximal to the orifice so it was here that the ureter was unroofed with the resectoscope loop, employing the cutting current. The stone was then easily evacuated with the cold loop. This case illustrates the failure that can occur with conventional instrumentation whereas the stone was quickly cut out transurethrally.

Figure 4—Case #1, Stone returned to original position after removing catheter

Figure 5—Case #2, Stone lower end ureter

Case No. 2 illustrates a complication of stricture of the ureteral orifice following transurethral ureterolithotomy. The original urogram (Figure 5) demonstrates a small stone. It was impossible to bypass the stone with an ordinary dislodger. It was decided to perform resection but with some trepidation because the bulge behind the orifice was equivocal, if it existed at all. It was necessary to resect very deeply before the stone was finally encountered and evacuated. The immediate post-operative pyelogram (Figure 6) shows no hydronephrosis. The patient was discharged perfectly well but some three weeks later developed chills, fever and pain in the left renal area. Figure 7 shows the appearance of the intravenous urogram at that time.

Figure 6—Case #2, Immediate post operative film showing no hydronephrosis after resecting stone

Cystoscopy revealed a pin-point orifice in a well-healed cavity at the site of the resection. The strictured orifice was slit with the Bugbee electrode in hardly more time that it takes to tell. The next photograph of a urogram taken a few days later (Figure 8) reveals perfectly normal findings. The patient has had no further trouble. It is our opinion that once the stone had been encountered and removed at the original operation, a few small pedunculated fragments of mucosa had been left behind and intracystic pressure, we believe, forced them into the denuded cavity where they "took" and grew like a graft.

Case No. 3 was that of a young male adult in whom no instrument could be made to bypass the stone. A very deep transurethral excavation of the intramural portion of the ureter was made until finally it was thought that the crystalline substance of the stone could be seen. While exchanging instruments and washing out fragments of resected tissue it was believed erroneously that the stone had washed out. A catheter passed without resistance and X-ray at the table seemed to confirm this hope. Actually the stone had not passed, but the post-voiding film of the cystogram (Figure 9) again shows how extensively one may safely resect the bladder junction. Before this film was taken it had been necessary to open the ureter from above and push the stone into the bladder with a basket. The appearance of the ureter here is typical of that in which much recent instrumentation has taken place.

Case No. 4. Two years before consulting us this adult male had had severe right renal colic accompanied by chills and fever. After extensive medical treatment the kidney and ureter were explored surgically elsewhere. When no stone or other lesion could be found a nephrectomy was done and a small non-opaque stone was found tucked away in a calyx in anotherwise normal kidney. Two years following this operation the patient developed complete anuria. Intravenous pyelogram did not visualize the surviving left kidney, but showed a faintly visualized stone at the lower end of the ureter. We performed a transurethral ureterolithotomy which exposed a stone which was easily removed. The patient returned to his home the following morning after operation. It

Figure 7—Case #2, Post operative stricture lower end of ureter

has been one and a half years since this operation was done and his local physician reports that he has had no further trouble.

These cases all illustrate extraordinary angles of the calculus problem and are not typical. Of approximately 30 patients whom we have treated with this operation two have had postoperative strictures. Both probably were due to the same failure to remove all tags of tissue following the resection and both were easily and permanent-

Figure 8—Case #2, Stricture relieved by slitting ureteral orifice

ly relieved by simply slitting the strictured orifice with the Bugbee electrode. There have been no instances of ureteral reflux, no chills, and no fever of discernible morbidity other than in the patients with strictures. We do not believe that it is necessary to leave an ureteral catheter in place. The patient is ready to go home the next day or even as soon as the anesthetic wears off.

Figure 9—Case #3, Showing extensive resection of ureteral orifice; also ureteritis due to instrumentation

Figure 10—Case #4, One hour intravenous pyelogram showing non-visualization of single left kidney due to stone lower end of ureter

There have been no cases of significant postoperative hematuria.

Summary and Conclusions

1. A new and reasonably simple method for evacuation of impacted stones in the ureterovesical junction has been presented.

2. Illustrative cases have been presented which show the reasons for, the limitations of and the consequences of transurethral ureterolithotomy.

Our experience has led us to these conclusions:

1. Transurethral ureterolithotomy, in properly selected cases, is easy and safe for those accustomed to endoscopic surgery.

2. When the operation is properly performed there is no adverse sequelae. If stricture of the ureteral orifice should occur the situation can be easily corrected. Thus the operation is a less traumatic procedure and is more certain than instrumentation with any of the conventional stone dislodgers. For this reason it produces less morbidity and prolonged hospital stay than open operations or convention closed manipulations for the removal of low ureteral stones.

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OKLAHOMA'S ARTERY BANK

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Modern advances in the diagnosis and surgical correction of cardiovascular lesions have made the procurement, preservation and implantation of blood vessel grafts an important factor in the success of this type of operation. The main function of the bank is to store an adequate supply of suitable, safe, homologous arterial transplants.[10] Approximately a year and a half ago an artery bank was established for the physicians of the State. The bank has been under the supervision of the Department of Surgery at the University Medical Center and has the continuing support and interest of the Oklahoma State Heart Association.

This type of surgical procedure dates to 1952 when DuBost first successfully resected an aneurysm of the abdominal aorta and re-established continuity with a preserved human arterial graft.[3] Since that time many, many hundreds of people have benefited from this type of operation. Because the demand for a vessel substitute has multi-

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plied, a supply of vessels has become a must. Quite naturally, numerous methods have been advocated for obtaining graft material and for sterilization and for preservation of graft material. Moreover, there has been recent interest in the use of synthetic fabrics as vessel substitutes. Currently, it is apparent that there is acceptance of cloth prostheses.[2,5] The best artery graft and the best artery bank must be left to future study. However, it is evident that a well established, functioning bank is necessary at this time as part of complete medical care and facilities of the University Center. How then does the Artery Bank of Oklahoma contribute to this new type of surgical technique?

Hospitals in Oklahoma City and Tulsa, as well as others from time to time, participate in the procurement of suitable arteries. When a suitable individual expires in one of these hopsitals, usually someone under the age of 40 dying of acute trauma or of conditions in which hepatitis, syphilis, malaria and widespread neoplastic disease can be excluded, permission is obtained from the next of kin for the removal of blood vessels for therapeutic purposes. This is done prior to embalming and within a period of six to eight hours after death. Following removal of the vessels, they are placed in a nutrient solution to which antibiotic has been added and transported to the Artery Bank. It should be emphasized it is not necessary to remove the vessels under sterile conditions. At the blood vessel bank, located in the University Hospital, at the Medical Center, the vessels are trimmed of perivascular connective tissues and a culture is planted. Then the vessel is sterilized in ethylene oxide. Following this it is placed in a vacuum system and quickly frozen. Over a period of hours the vessel is lyophilized and sealed in a glass tube in which it is stored. The vessel may be kept in this condition for several years.

When the time comes to use the vessel, the surgeon obtains the artery from the vessel bank after completing the data card kept with the artery, and the artery is reconstituted by breaking open its sterilized glass container in a basin containing isotonic salt solution. All of the branches of the artery are carefully ligated with fine silk and the vessel tested for leaks. The graft is now ready for implantation. To date, many patients throughout the State have been helped by these vessels.

Discussion

There has been considerable difference of opinion concerning the method used in obtaining arteries for banks. Some have stressed the need of using sterile conditions while taking vessels from the deceased, while others have advocated merely taking the vessels out at the time of autopsy prior to the time of embalming. The latter method has been used satisfactorily here. We have found no need to obtain the vessels under sterile conditions and take the vessels in the hospital morgue, using conventional autopsy instruments. Then the vessel is placed in a solution of sterile saline to which antibiotic has been added for transportation to the bank. Of course, it is imperative that the vessel be sterilized following this technique. Numerous methods of sterilization have been employed. These have ranged from formaldehyde transformation of the artery to the use of high voltage x-ray,[11] gamma radiation and chemical sterilization. Chemically the vessels may be sterilized with beta propiolactone[12] which is a very suitable chemical agent, or ethylene oxide.[9] In practice ethylene oxide is satisfactory and a sterile culture can readily be obtained using this chemical as a sterilizing agent.

The next major problem in artery bank function has been the storage of vessels. Initially it was found that vessels could be stored for periods of two to three weeks in a nutrient solution,[8] either Hanks, Hartman's or Tyrode's solution, but if the vessel was not used at the end of this time it had to be discarded. This, of course, was not efficient and many very fine vessels were thrown away because they were not used during the prescribed time. It became apparent that some method of preservation for storage should be used. A method that has some merit is so-called quick freezing,[4] in which the vessel is rapidly frozen in an acetone-dry ice mixture and then kept in a deep freeze until used. In such a state it is

imperative that crystals do not form in the vessel. The formation of ice crystals can ruin a vessel and is one of the undesirable features of the method. Moreover, the vessels must be used in six to twelve months as they deteriorate at the end of that time even if frozen. They deteriorate because of the persistence of hydration. The method of lyophilization,[1] therefore, became imperative and has been the standard method in most centers, as well as here. By this method the grafts are frozen at —70° centigrade after sterilizing and are attached to a glass manifold apparatus. During drying the vacuum pressure within the system is maintained in the region of 180 micron of mercury pressure. The drying continues with the graft submerged in an alcohol-dry ice mixture, so that vapor pressure will not rise and ice crystals will not form. Crystals will rupture the membranes of the cells of the tissue being processed. If the vacuum is continued for at least eight to twelve hours the moisture content is reduced to less than one per cent. Finally, the artery is sealed in the glass tube and stored at room temperature until used.

Arteries are only one of several tissues that are now being used as homografts or substitutes for diseased tissues. We are all aware of the recent trends in ophthalmology and the need for eye banks. We are also aware of the use made of bone banks by orthopedic, plastic and oral surgeons. Moreover, dura, skin and other tissues have also been preserved for short periods of time. The implications for the future of these various banks are indeed intriguing and deserve a moment's thought.

Immunologic reactions in the past have impaired homotransplantation of tissues since the host tissues and biochemical structure will not allow the acceptance of foreign tissues. But let us consider for a moment the patient with agammaglobulinemia.[7] These patients have increased susceptibility to infection, absence of gamma globulin and failure of antibody production. Significantly enough, however, transplantation of the skin in both full and split thicknesses in some patients with congenital agammaglobulinemia result in the probability of *permanent* survival of the graft. Apparently homotransplant destruction is concerned with both circulating blood cells and plasma antibodies.[6] This implies that in the future one will see the disappearance of individual artery banks, bone banks, eye banks and the like, and see the emergence of tissue banks. Here all types of *living* tissues may be kept and can be made acceptable to the recipient's biochemical structure with the adjunct that immunological reactions be altered to make this acceptance possible.

Summary

1. Oklahoma today has a well organized, functioning Artery Bank.

2. This bank has aided in the advance of vascular surgery in the State.

3. The use of homografts combined with immunologic studies may certainly open the door to a whole field of tissue transplantation in the future.

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Transthoracic Extrapleural Approach for NEPHRECTOMY

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It is an accepted principle of cancer surgery not only that a malignant growth must be widely excised but that this should be accomplished without direct trauma to the lesion. The cancerous kidney is no exception. Its pedicle should be ligated early and the organ, with its fascial and fatty envelope of tissue intact, removed with a minimum of operative manipulation.

Unfortunately, in many instances where the tumor is large the usual lumbar approach to the kidney is unsatisfactory. And even when the twelfth rib is excised it is often difficult to mobilize the kidney and expose its pedicle. Obviously, the rough manipulation often required to free a tumorous kidney from its attachments does not conform to one of the basic principles of cancer surgery—complete excision of the lesion without trauma.

A number of approaches have been suggested to expedite operation for the malignant kidney. At present the transthoracic route has wide popularity. This method, although it provides excellent exposure, has the disadvantage of transgressing the thoracic cavity. I have found the most satisfactory approach to the complete removal of the neoplastic kidney to be through a thoraco-abdominal-extrapleural-eleventh rib incision, which I have used in 10 nephrectomies. Although this is not a new technique, it is a method not commonly applied. I believe it has surgical advantages not fully realized. It is not difficult to perform and provides a most excellent operative exposure of the kidney. In no instance have I encountered serious postoperative complications and I agree with Doctor M. Woodruff that patients seem to suffer from less postoperative pain following the lumbar incision.

Technique

Under general anesthesia with use of an endotracheal tube, the patient is placed in the decubitus position without flexion. This is important. The flexion position as ordinarily used in nephrectomy is inadvisable since it places the pleura under stretch and exposes this structure to the risk of accidental perforation.

The incision is made along the eleventh rib, extending behind its angle posteriorly and anteriorly into the abdominal wall. The muscles overlying the eleventh rib are divided and the periosteum is excised and stripped from the surfaces of the rib. The stripping is started anterior to the pleural margin and carried posteriorly, to the pleura itself. The rib is cut posterior to its angle. The anterior abdominal muscles are then excised to expose the peritoneum and Gerota's fascia.

The incision is then carried posteriorly, beginning at the tip of the eleventh rib bed, until one encounters diaphragmatic fibers traversing the line of incision. These muscular fibers are transected almost to the pleural margin. Thereafter, by blunt finger dissection, the pleura may be freed from the posterior surface of the rib bed and pushed backward and upward almost to the level of the tenth rib.

The nephrectomy is started posteriorly, with exposure of the renal pedicle. Double ligatures are placed separately on the artery and vein before they are severed. Only after the vascular pedicle has been ligated is the kidney, with Gerota's fascia intact, mobilized. Care must be exercised in developing a cleavage plan in the anterior and

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Studies on the Maintenance of Functional and Anatomic ORGAN-INTEGRITY *in* CULTURE[1, 2]

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The bulk of medico-biologic investigation directly or indirectly and whether or not by intent is involved in some manner in unravelling the many facets of the general problem of "the maintenance of functional and anatomic organ-integrity." This problem is, at the same time, the aim generally of clinical practice. However, information from a wide variety of areas and by equally diverse investigative disciplines is far from complete and even the parameters per se of many of the specific related problems are not known. In the living body (in vivo) the functional and anatomic integrity of each organ must be dependent upon the continued maintenance of appropriate quantitative, qualitative and functional inter-relations between the constituent parenchymal, stromal, vascular and nervous components; yet the regulatory mechanisms are not known. Specifically, it is not established what factors are involved in maintaining the right amounts of stroma and parenchyma, or what is amiss in fibrosis or even precisely how connective tissues fibers are formed. We do not know how spontaneous, normally occurring differential physiologic degenerative processes are governed, or how the growth and repair processes of the several organ constituents are regulated so that repair is neither overdone nor under-done. It is not known to what extent the maintenance of organ-integrity is governed by factors intrinsic within a given organ or by extrinsic ones of which hormones are exemplary. A primary task in clarifying the mechanisms underlying the maintenance of organ-integrity must concern itself with ascertaining, if possible, the extent to which organ-integrity is governed by intrinsic factors.

Considerable information can be gained on this point through study of the extent and nature of the cytologic, histologic and functional expressions of the parenchymal, stromal and vascular constituency of isolated organs. In this report I shall briefly review some of the general findings made in this laboratory on certain of the anatomic and histo-physiologic expressions of the parenchymal, stromal and vascular constituents of adult, mammalian female genital tract organs during the course of isolation in vitro by culturing methods.

FOOTNOTES

1. These studies have been supported by funds from the Committee for Research in Problems of Sex of the National Academy of Sciences—National Research Council, The Helen Hay Whitney Foundation, and The National Institutes of Health, project C-2214-C-C3.
2. Presented in part at the Jordan Hall of Biology Dedicatory Symposium, Indiana University, June 6-9, 1956.

The General Method

All previous work on organ culture by means of essentially conventional tissue culture methods (Cameron, '50; Parker, '50; Gey, '37) has been limited to studies of small fragments of organs or to embryonal, fetal or new-born organs sufficiently small (Fell, '54; Chen, '54; Gaillard, '51; Martinovitch, '38; Trowell, '52). This has been due to the fact that successful cultivation in vitro of any tissue mass depends upon the provision of a system whereby nutrients (including oxygen) and metabolic wastes can be exchanged between all areas of the explant at rates sufficient to satisfy the metabolic needs of the explanted tissue-complex. If diffusion is the basic mechanism of exchange (in lieu of vascular perfusion), the explanted tissue mass must have one of its diameters approaching 1 mm or less. Certain intact organs of the adult bat, Tadarida mexicana, and the mouse (Carworth Farms, Strain #1) (Guthrie and Jeffers, '38), have dimensions which rather closely approach those desired and have been used extensively in this laboratory in investigations bearing on many facets of the problem of organ-integrity. Some data on the intact ovaries, oviducts and uteri of adult bats isolated in organ culture will be reported here.

The method of organ culture used here currently consists of mounting aseptically removed intact organs on discs of silicone-treated lens paper (Chen, '54) which float on the surface of a fluid nutrient phase (4cc/flask) within 100 cc Erlenmeyer or Florence flasks (Fig. 3). Capillarity through the lens paper float effects the encapsulation of the explant by a thin layer of fluid nutrient through which gaseous phase exchanges are effected at maximal rates (Chen, '54). The Florence flask can be mounted horizontally in the conventional roller drum to improve the efficiency of metabolite and nutrient exchanges. The fluid nutrient consists of mixtures of human ascitic fluid (30-45%), balanced saline (Simm's, Tyrode's, or Earle's 45-70%) with or without chick embryo extract (5-15%). The gaseous phase used in the work being reported here was compositionally atmospheric air; although mixtures of air and carbon-dioxide or 100% oxygen may be used according to experiment design. The gaseous and fluid nutrient phases are changed conveniently through perforable rubber caps or stoppers sealing the flasks (Fig. 3), and were changed on the organ-cultures being reported here at four, five and seven day intervals. Cultivation periods have ranged from 4-35 days.

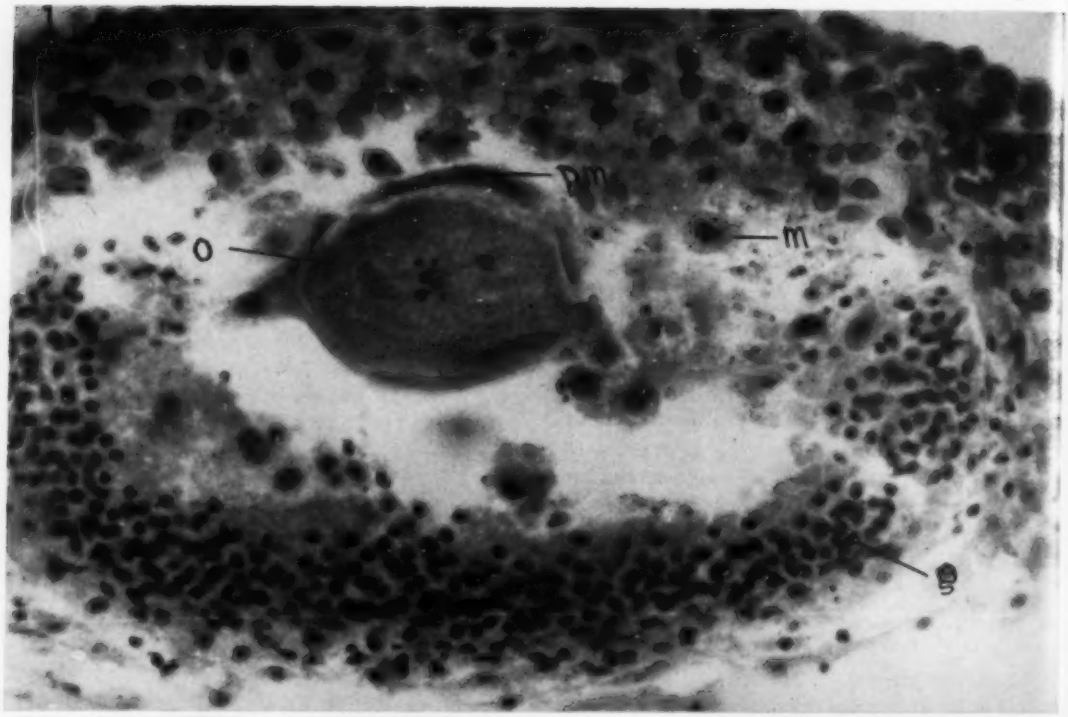
All organs after various periods of cultivation were studied by conventional histopathologic techniques for data bearing specifically on the points of maintenance growth, histo-pathologic alterations, physiologic (normal) retrograde changes, histophysiologic repair processes and whether growth response patterns were histotypic, organotypic or quantitatively uncontrolled or unorganized.

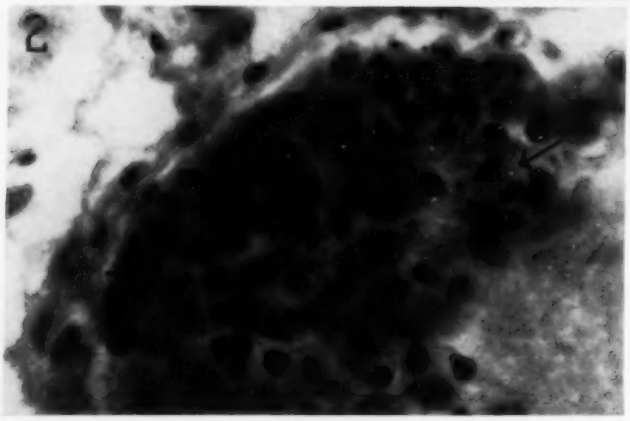
In some cases of gravid and non-gravid genital tract complexes in culture, frog pregnancy tests were run on the fluid nutrient phases to obtain data on possible endocrine production.

Uncultured organs taken at the time of sacrifice served as controls for all cultured organs and complexes.

Observations and Discussion

The ovary: The uncultured intact ovary of the adult bat taken approximately three months post-partem measures about 1 x 1.3 x 1.5 mm. Histologically it is organized into medullary and cortical areas (Fig. 4). The parenchymal component is comprised collectively of 1) a surfacing germinal epithelium present as a single layer of squamous to cuboidal cell types, 2) egg follicles in various stages of development and physiologic degeneration or atresia, and 3) an abundance of interstitial tissue arranged as epithelial cords or islands in the medullary area. The stromal component consists of delicate strands of connective tissue which extend from the mesovarium throughout the cortical and medullary areas where it is organized about the follicles as theca folliculi and as partitioning strands between the cords of epithelioid interstitial cells. Major blood vessels entering the hilus of the ovary from the mesovarium comprise prominent medullary vessels which as smaller ones are distributed through the stroma in intimate association with the parenchymal tissues (Fig. 4) (Guthrie and Jeffers, '38).





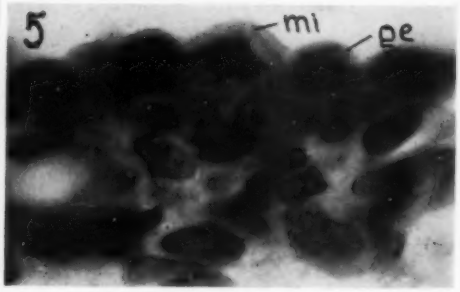


Plate 1

Intact ovaries maintained in organ culture for periods ranging up to four weeks are rather remarkably unchanged in their basic histologic structure and tissue composition from uncultured (control) ovaries. One constant change consists of the death and disappearance of formed blood cell elements which is effected in part by vascular endothelial cell phagocytosis (Richter, '58). A second is the apparent disappearance of capillaries. This seems not to be due to their actual destruction but rather to their collapse—a condition which renders them virtually indistinguishable from the delicate connective tissue strands in which they are situated (Richter, '58). Thirdly, there is some reduction in the thickness of ovarian cortex the longer the period of cultivation (Figs. 6, 8, 9). This is probably due to a combination of factors. Firstly, in culture there is no hypophysial follicular stimulating hormone (or any other known hormones for that matter) present to influence the maturation of Graffian follicles (Guthrie, '54; Martinovitch, '38). Secondly, follicular atresia as a normal physiologic degenerative process continues on in the cultured ovaries just as in vivo so that the number of older follicles present at the beginning of cultivation is progressively diminished leaving only small young ones.

With the exception of the above general alterations in the capillaries, blood cells, and thickness of ovarian cortex, all other histologic structural features and certain associated histophysiologic processes appear normal. There is no disorganized growth or overgrowth of any of the parenchymal, stromal or vascular components. Homoplastic growth, as exemplified by the production of new cells by mitosis of fibroblasts (Figs. 1, 14), of interstitial cells (Fig. 10), of germinal epithelial cells (Fig. 5), of granulosum cells (Fig. 2) and even vascular endothelial cells (Richter, '58), is quantitatively limited and organized histotypically and organo-typically. Collectively, this type of growth is descriptively in the nature of organ maintenance or repair growth of the several different constituent tissue types (Richter, '58; Richter, Cloud and Woodward, '56).

The source of ova and follicles available during the period of active mammalian reproduction has been the subject of much controversy, although it is now becoming accepted that the ova ripened during sexual maturity are formed concurrently from the germinal epithelium surfacing the ovary (Patten, '46). All early workers who studied oogenesis of the bat (Van Beneden, 1880; Guthrie and Jeffers, '38) concluded that new ova are produced continuously in the adult from germinal epithelium, although no mitosing germinal epithelial cells were ever observed. According to these workers, cells of the germinal epithelium enlarge differentially and become displaced beneath it as short epithelial cords that subsequently differentiate into follicular and egg cells. In the cultured intact adult ovary differential growth of germinal epithelium (Fig 5), germinal epithelial cell cords (Figs. 6, 8), and the formation of histotypic and organotypic primordial and primary follicles occur quite as these workers recorded (Figs. 6-9) in vivo. They are, also, in accord with the findings of Gaillard ('51) on the differential growth of primordial and primary follicles from germinal epithelium in cultured fragments of the human fetal ovarian cortex. All data based on in vitro isolation of ovarian tissues show that oval and follicular development in vitro does not progress beyond the primordial or primary follicular stages. At the same time, they indicate that development to the primordial and primary follicular stages is referable to intrinsic, genetically determined homoplastic and heteroplastic capacities of the germinal epithelium.

Two complex phenomena of normal occurrence in ovaries in vivo deserve special mention because each in part is exemplary of physiologic (normal) degenerative and repair processes which are essential in the maintenance in vivo of the functional and anatomic integrity of the ovary. The one phenomenon is follicular atresia and the other concerns the functional and quantitative level of interstitial tissue.

Follicular atresia in vivo is characterized by complex cytophysiologic retrograde changes expressed by pycnosis, karyorhexis and cytolysis of the ovum and granulosum cells of old follicles. Concurrently, the acell-

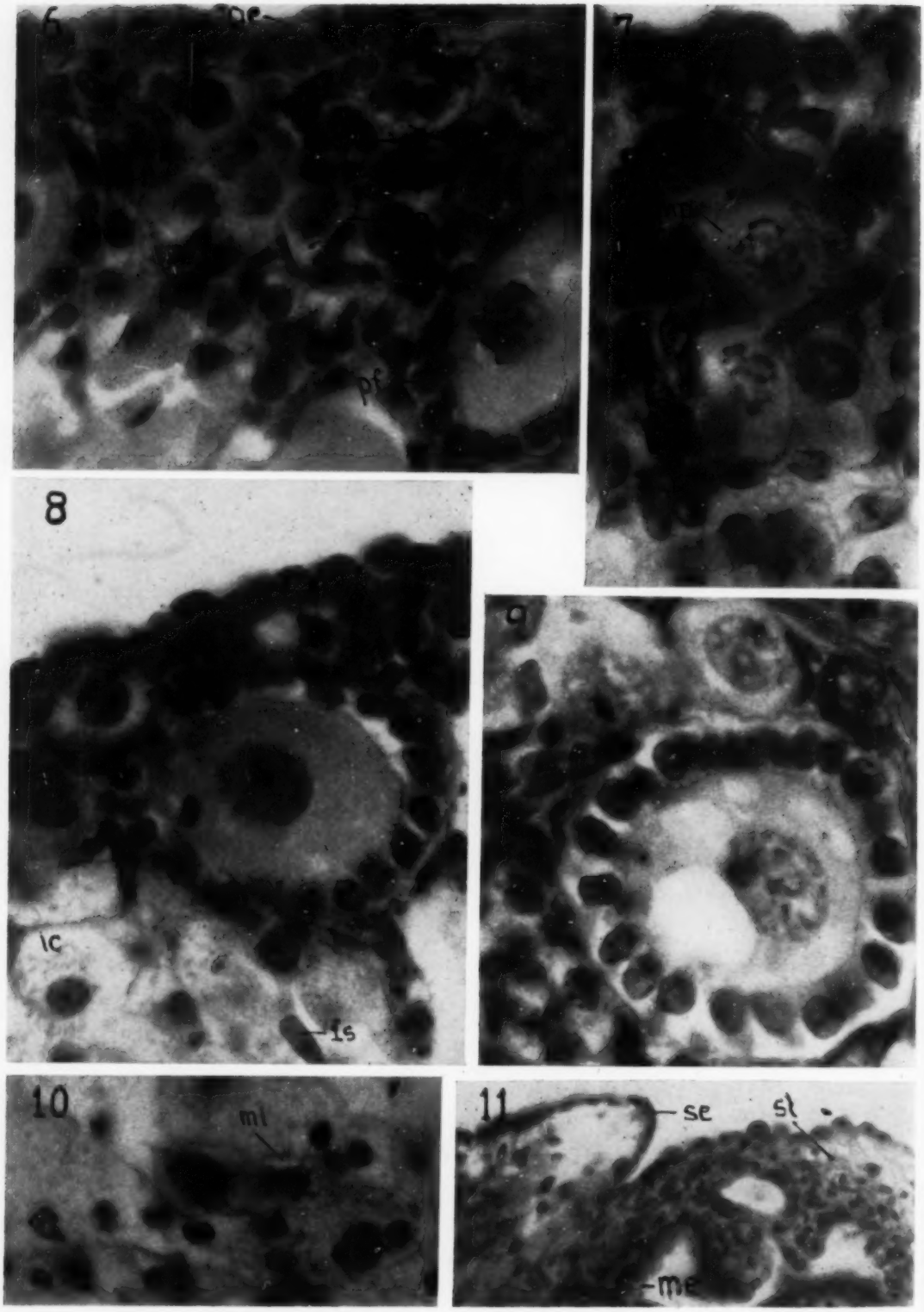


Plate 2

ular pellucid membrane about the ovum, and the basement membrane about the granulosum break down; some of the granulosum cells (and confirmed in studies of ovaries of trypan blue treated mice) become actively phagocytic and ingest the protoplasmic remains of granulosum cells and the ovum; and the follicle becomes invaded and replaced by connective tissue fibroblasts from the theca folliculi. The last discernible remnant of an atretic follicle is a shrunken bit of pellucid membrane (Figs. 4, 6) which finally is somehow resorbed under the influence of the stromal connective tissue components. In ovaries isolated in culture, follicular atresia, including the entire gamut of cyto- and histo-physiologic degenerative and organized inflammatory repair changes, occurs in normal fashion just as in vivo (Figs. 3, 4).

Guthrie and Jeffers ('38) have reported a continuous cyclic turnover of a considerable portion of interstitial tissue in the bat ovary. It is characterized 1) by a progressive hypertrophy of the interstitial cells with attending increases in lipid storage and secretory products and 2) by cytophysiologic degeneration in which the hypertrophic interstitial cells undergo pycnosis, cytorhexis and finally dissolution (Fig. 12) with replacement by ordinary stromal connective tissue elements. This turnover of interstitial cells through hypertrophy, physiologic degeneration, and destruction (Fig. 13) and replacement by connective tissue stromal elements (Fig. 14) occurs, also, in organ-cultured ovaries. Replenishment of the interstitial cell population necessitated by this continuous degenerative turnover as shown by the present study is accomplished homoplastically by mitosis of the non-hypertrophic interstitial cell forms (Fig. 10) and not as others have suggested (Gurthrie and Jeffers, '38) by the transformation of thecal fibroblasts into interstitial cells.

The quantitatively limited and organized histo- and organotypic growth patterns of the several parenchymal and stromal cell constituents of the intact ovary in organ culture are in marked contrast to the growth responses of the same cell and tissue types when small fragments of ovary are cultured. In the latter instance the several parenchymal cell species (germinal epithelial, egg, granulosum and interstitial cells) and stromal cells (fibroblasts, macrophages) migrate and proliferate in quantitatively uncontrolled fashion and give rise to extensive outgrowths of epithelia and free epithelial cells and of fibroblasts etc. which (with one exception, Gaillard, '51) show little histotypic and none of the organotypic structural characteristics of the donor ovary (Long, '40, fetal and newborn mouse; Loeb and Fleisher, '19, rabbit; Champy, '26-27, adult rabbit; Champy and Morita, '28, rabbit and rat; Macabruni, '13, human fetal ovary; Wolff and Zondek, '25, human fetal and adult ovaries; Martinovitch, '38, fetal and newborn rat ovary; Olivo, '34, human fetal ovary; Takeguti, '35, dog). Carrel and Lindbergh ('35) reported disorganized overgrowth of stromal and parenchymal tissues of ovaries maintained in vitro by perfusion of diverse media through the vascular bed of the organ with the pulsating Lindbergh apparatus.

The oviduct and uterus: The oviduct and uterus of the adult bat in organ culture show only organized and controlled histotypic and organotypic maintenance growth of their constituent parenchymal, stromal and vascular components (Richter, Cloud and Woodward, '56). After many days in culture, they are remarkably unchanged from uncultured controls (Figs. 11, 16, 17, 15) except for the death and disappearance of formed blood cells and the collapse of capillaries. Cells of the uterine glands contain secretory products and indicate a continuation of some normal functional secretory activity in vitro. Fluid nutrient after modification by the cultivation in it of the intact gravid-uterus-oviduct-ovary complex gives a positive frog pregnancy test and indicates the production in vitro of chorionic gonadotropin.

In contrast, cultured fragments of the oviduct and uterus of a variety of mammals show generally uncontrolled and unorganized outgrowths of epithelial sheets and stromal connective tissue cell elements (Barta, '28, rabbit; Chlopin, '37; Hirsch and Jones, '33, human; Loeb and Fleisher, '19, guinea pig; Traut, '28, human; Valle and Pomerat, '47, human).

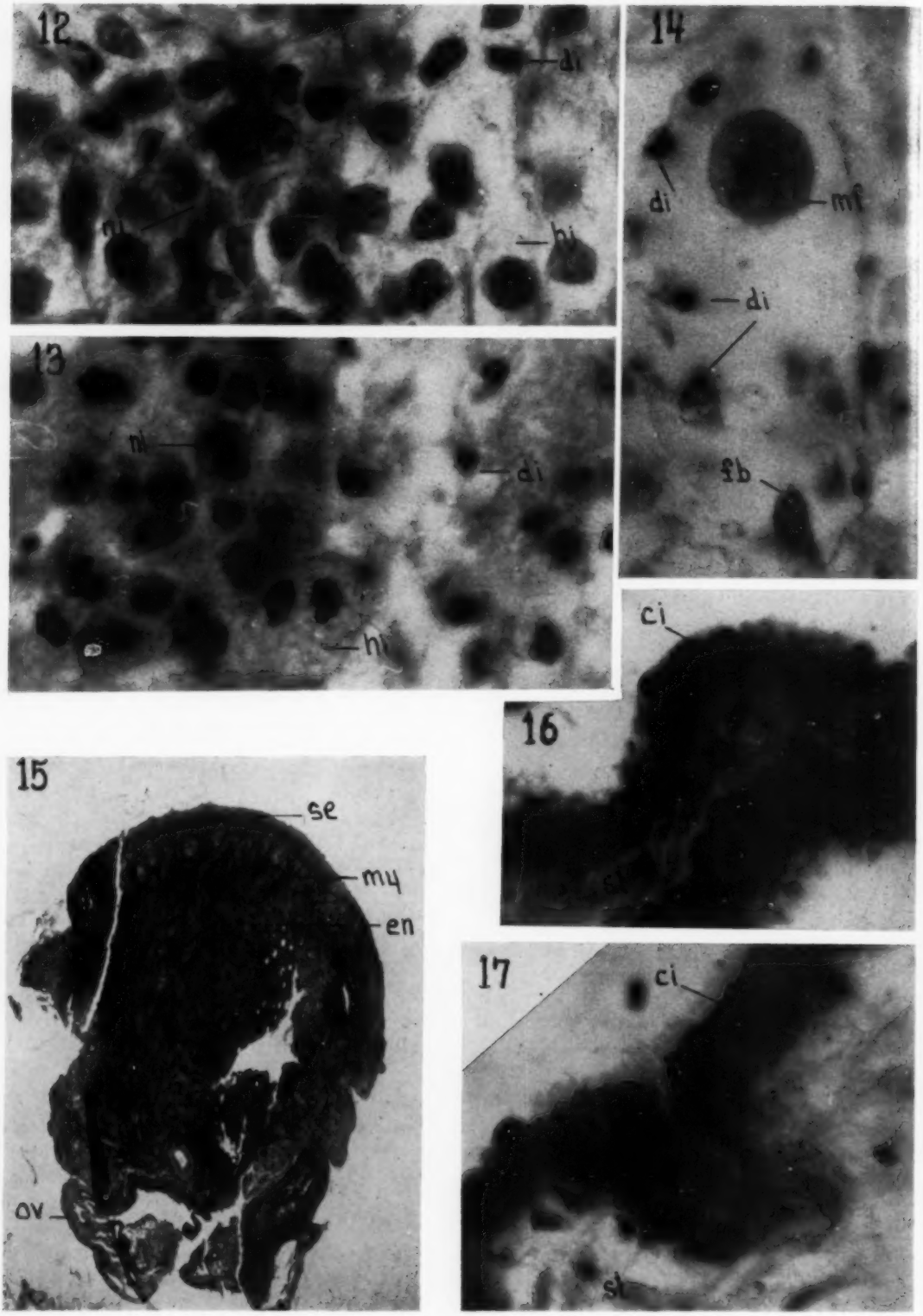


Plate 3

General Summary

Intact, adult ovaries, oviducts and uteri of the bat when isolated by organ culturing from general extrinsic systemic integrating mechanisms (i. e., nervous system, endocrine glands, vascular system and blood), maintain their normal histo- and organologic structural patterns through quantitatively limited and organized growth responses of their constituent parenchymal and stromal cell elements.

In contrast, fragments of ovaries, oviducts and uteri generally show quantitatively unlimited and unorganized outgrowths of the several parenchymal and stromal cell elements.

The marked differences in the degree and character of the growth responses of the cellular constituency of intact organs versus organ fragments in culture are referable basically to the degree of inflammatory stimulation occasioned by the method of cultivation. Tissue insult (i. e., cell death and damage and general structural derangement, compositionally and physically) is minimal in the case of explanted intact organs, and is qualitatively and quantitatively great in the case of organ fragments. The particular growth responses reflect directly these differences in degree of tissue insult and are in both instances of the nature of local intrinsic inflammatory reactions (Richter, '58).

The general lack of integrated histo- and organotypic growth responses in organ-fragments, although present in intact organs in culture, stresses the importance of intrinsic inter- or extracellular stereotropic influences (Loeb and Fleisher, '17, '18, '19; Maximow, '25; Leighton, '51; Clark '46) in initiating cell proliferation and migration and in the conditioning of cell and tissue growth patterns whether in vivo or in vitro. The present studies clearly emphasize that the conditioning of histo- and organotypic growth responses and of some special cellular functions (e. g., phagocytosis and motility) is effected largely in the fully differentiated organ by alterations in the spatial, physical and compositional characters per se 1) of non-protoplasmic extracellular formed elements (basement and pellucid membranes, fibrous components, dead cells, and particulate cell debris) (Loeb and Fleisher, '19; Richter, '58; Maximow, '25, and figure 1), 2) of nonformed extracellular components (amorphic ground substance, lysed cell substances, lytic substances from formed intercellular components and synthesized products released by constituent living cells); and 3) of the surfaces of living cells (Richter, '56; Maximow, '25; Robb-Smith, '57; McManus, '57). Objective evidence of the interplay of all three categories of the above intrinsic factors is to be found in follicular atresia. Precise chemical and physical information about these factors in general and in particular is conspicuously lacking or inadequate and at present our knowledge of them is virtually limited 1) to morphological description and broad chemical and physical characterizations, and 2) to their objectively demonstrable involvement in the conditioning of genetically determined cellular capacities such as phagocytosis, cell division, motility, secretory activity etc.

The practical value and need for much precise additional information bearing on the biologic, chemical and physical aspects of these factors cannot be over-emphasized for the latter are of fundamental import in neoplastic phenomena, general defense, tissue maintenance and repair processes and in the design of therapeutic agents, surgical procedures and transplantation therapy.

Acknowledgment: I would extend my thanks and appreciation to Betty Ritcheson, S. Cloud, N. W. Woodward, Jr., Jacqueline King, and V. Ballard for their technical assistance.

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GENERAL LEGEND

All illustrations are unretouched photomicrographs taken with the 35 mm Leica camera in combination with the Micro-Ibso attachment of histologic sections stained with hematoxylin and eosin.

Plate 1

Figure 1—Organized follicular atresia in 7 day cultured intact adult bat ovary, showing degenerate ovum (o), partially disrupted pellucid membrane (pm) and granulosum (g), infiltrating and mitosing filroblasts (m). 450X

Figure 2—Portion of atretic follicle showing mitosing granulosum cells (arrows) from a 10 day organ-cultured ovary. 900X mag.

Figure 3—Organ culture set-up showing four complete unilateral female genital tract complexes each of which is comprised of an intact ovary and associated oviduct and uterus after 14 days in culture. Magnification is ⅞ actual size.

Figure 4—Section througfh entire control (uncultured) ovary and associated mesentaries and oviduct showing cortical area with follicles in diverse stages of maturation (fm) and atresia (a), and the medullary area with abundance of pale interstitial tissue (it), connective tissue strands (ct) and medullary blood vessels (bx). 40X mag.

Figure 5—Portion of ovarian cortex from 7 day organ-culture showing histo- and organotypic maintenance growth of germinal epithelium (ge) with one cell in mitosis (mi). 900X mag.

Plate 2

Figure 6—Ovarian cortex of 12 day organ-culture showing histo- and organotypic character of germinal epithelium (ge) germinal epithelial cell cords (gec), primordial ova with primitive granulosum (pg), and primary follicles in growth phase (pf). 700X mag.

Figure 7—Ovarian cortex of 7 day organ culture showing primordial follicles in early growth phase with the egg nuclei in meiotic prophase stages (mp). 900X mag.

Figure 8—Ovarian cortex of 7 day culture showing a) normal histo- and organotypic structural relation between fibroblastic stromal tissue (fs), interstitial cells (ic) and follicles and b) several stages in the origin of primordial follicles from germinal epithelium. 700X mag.

Figure 9—Ovarian cortex of uncultured control showing normal histology and three primary follicles in early growth phases. 900X mag.

Figure 10—Interstitial cell group with one in mitosis (mi). 700X mag.

Figure 11—Wall of ampulla of oviduct 7 days in organ culture showing normal histo- and organotypic structure, serosal epithelium (se) and lining mucosal epithelium (me), and stroma (st). 450X mag.

Plate 3

Figure 12—Representative interstitial cell group from uncultured control ovary showing cells in stages of hypertrophy (hi), degeneration (di) and non-hypertrophy (ni). 900X mag.

Figure 13—Representative interstitial cell group from 10 day organ culture showing non-hypertropic (ni), hypertrophic (hi) and degenerative (di) interstitial cells (Compare with figure 12). 900X mag.

Figure 14—A terminally degenerate interstitial cell group (di) in 10 day organ culture being replaced by organized infiltrating fibroblasts (fb) one of which is in mitosis (mf). 900X mag.

Figure 15—Slightly tangential section through 17 day cultured uterus showing endometrium (en), myometrium (my) and serosa (se) and associated oviduct (ov). 40X mag.

Figure 16—Portion of control (uncultured) fimbria showing ciliated epithelium (ci) and stromal connective tissue component (st). 900X mag.

Figure 17—Portion of 7 day organ-cultured fimbria showing normalcy of ciliated epithelium (ci) and stromal connective tissue component (st). Compare with figue 16. 900X mag.

Experimental Therapeutic Unit

A recent handy desk reference of drugs lists over 42,000 different drugs currently available in pharmacies. This staggering total emphasizes the need for adequate evaluation of agents before they are marketed as effective therapeutic tools.

A unit with this as its aim has been established as a joint venture of the Medical Service of the Oklahoma City VA Hospital, the Department of Medicine, University of Oklahoma, and the Biostatistical Unit of the Department of Preventive Medicine and Public Health. This research unit, which includes metabolic beds, offices, and a laboratory, is located in the VA Hospital and is supported entirely by grants.

It was organized under the leadership of Doctor James A. Hagans and has continued under the supervision of Doctor David C. Mock. Other members of the group are Doctor Stanley McCampbell and Doctor Adrian Kyriakopoulos.

In addition to evaluating drugs, the investigators have been concerned with methods of evaluation. Major areas of interest are antihypertensive drugs, unsaturated fatty acids, diuretics, hypoglycemic agents, and antiemetic agents. The work of the unit may be best illustrated by briefly summarizing some of the published results.

One study demonstrated that although premedication with a capsule prior to the ingestion of an emetic dose of ipecac led to a significant decrease in the incidence of nausea and vomiting compared to ipecac ingestion alone without premedication, the placebo capsule was equally as effective as was chlorpromazine and an experimental antiemetic agent, SKF 4657. This study stressed the need of the placebo double blind design in experiments attempting to assess the value of the antiemetic agent. Comparison of "treatment results" to "no-treatment results" could lead to erroneous conclusions in favor of the agent being tested, when in truth a placebo agent, if tested, might perform just as well.[1]

A second study was designed to evaluate previous reports that there are "placebo reactors" and "non-reactors." It has been suggested by several investigators that the "placebo reactors" should be weeded out and dropped from experimental groups in attempting to assess the pharmacodynamic activity of a therapeutic agent. Twenty-five healthy subjects had seven consecutive placebo tests each administered as "antiemetic agents." The pattern of response of these individuals to repeated placebo tests was analyzed in several different ways. The distribution of the pure and impure placebo reactors (i.e. those who reacted favorably on all seven tests, or upon six or five or four out of the seven tests) was found to be identical to that which would be expected from the counting of the number of heads on seven consecutive tosses of an unbiased coin for 25 separate trials. Further, the ability to predict the outcome of the next placebo test based upon the outcome of the one, two, three, four, five, or six previous tests was not enhanced by dividing the groups into "reactors" and "non-reactors." No evidence was found to support the concept that a placebo reactor really existed, other than as a chance phenomenon, or to support the concept that those showing reactions to a placebo during the initial tests should be dropped from the experiment.[2]

A third study was concerned with the statistical technique of sequential analysis which was developed by Abraham Wald during the early years of World War II. It permitted inferences to be drawn from fewer observations than any other statistical plan known. Upon its release from the "restricted category" in 1945, it found almost immediate wide-spread use for quality control in industry. During the next ten years an occasional theoretical article suggesting its use in medical research appeared, along with one or two actual applications.

Doctors Doering, Wolf, Hagans et al have demonstrated its adaptation to the interpretation of therapeutic research data. Twenty-one different pharmacodynamic agents acting on five widely differing bodily processes were tested in seven hundred and five separate trials appropriately controlled by a placebo double-blind technique. In each in-

stance there were sufficient numbers of observations to permit analysis of the data by a more standard statistical technique. The method of sequential analysis, suitably adapted, yielded valid inferences after a relatively small number of observations; these were in each instance consistent with the inferences later drawn from the larger numbers and a more commonly used statistical technique.

It was concluded that the sequential plans described should be applicable in many areas of clinical investigation and that sequential analysis should become an important and useful tool in therapeutic research.[3, 4]

A fourth report dealt with diuretics. Healthy volunteer male subjects were studied in a metabolic ward under controlled conditions of fluid and food intake and their daily weight, 24-hour urine volume, 24-hour urine sodium, and the room temperature at 2 p.m. each day were recorded for three days of medication with either a placebo, Mictine 2.4 grams daily, or Rolicton, 2.4 or 1.2 grams daily. No significant alterations in urine volume, urine sodium or body weight were observed in the placebo group. Mictine, and Rolicton in both dosages, were found to significantly elevate urine volume and sodium and to significantly reduce body weight. Mictine was accompanied by a high incidence of gastrointestinal side effects such as nausea, anorexia, abdominal cramping, and diarrhea. These were not observed in either group receiving Rolicton.[5]

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ABSTRACTS

The Influence of Estrogen and Androgen on The Ovarian Response of Hypophysectomized Immature Rats to Gonadotropins

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Endocrinology, 62:313-321, 1958

The effects of human chorionic gonadotropin (HCG), pregnant mares' serum gonadotropin (PMS) and anterior pituitary gonadotropin (APG) singly and in combination with each other and with diethylstilbestrol (DES) and testosterone propionate (TP) on the ovaries of the hypophysectomized immature rat were studied. Ovarian weight and histological changes produced by these treatments are reported.

DES was found to augment APG, but not HCG or PMS, in this study. This augmentation was evidenced by ovarian weight gain and corpus luteum formation. Certain similarities of the effects of PMS, HCG, and APG to those of estrogen and androgen were found. TP antagonized the follicular development produced by APG and DES.

HCG caused striking thecal luteinization of the cystic follicles which were produced by both PMS and APG, and consequently a substantial ovarian weight gain. DES exerted protective effects on the ova and granulosa cells in various situations.

"Combination follicles," which were partially luteinized, yet contained healthy granulosa cells and ova, were produced by the combination of PMS, HCG, and DES.

APG was found to retard or prevent premature thecal luteinization, while HCG, and to a lesser extent PMS, promoted this phenomenon.

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Aortography Experience in Eighty-Five Procedures

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American Practitioner and Digest of Treatment, 8: 1059, 1957

Aortography consists of introducing a contrast media into the aorta to opacify it and its branches for x-ray visualization. Eighty-five aortograms were performed using a translumbar approach. There were no serious complications or sequelae. All patients showed a mild hypotension which improved spontaneously and required no therapy. Nausea occurred in 14 patients and two of these vomited. Urticaria occurred in 10. One patient had a mild transient acute pancreatitis. In five patients there was extravasation of the media extravascularly. This was not associated with any symptoms. The procedure was particularly effective in establishing the presence and site of involvement in occlusive arterial disease. This was particularly important in patients prior to resectional surgery for occlusive disease. Aneurysms were demonstrated and their extent delineated. Several patients, who were thought to have aneurysms, were found to have either a tortuous vessel or a mass of some other variety. Acute thrombophlebitis in a few patients caused signs of arterial occlusion which could not be diagnosed except for aortography. The procedure was of aid in demonstrating vascular insufficiency to the kidneys which may have been of etiological importance in hypertension.

The procedure is safe when carefully done and is a valuable diagnostic aid.

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Histochemical Use of Lead Tetraacetate 11 Alpha—Hydroxycarboxylic Acid Localization

LHOTKA, J. F.* 1957

Stain Techn. 32, 275-8

Lead tetraacetate, reacting in glacial acetic acid, will attack alpha-hydroxy acids as well as 1, 2-glycols to form leucofuchsin-positive aldehyde radicals in contrast to the more limited glycol oxidation of periodic acid. This property of lead tetraacetate suggested that a comparison of tissue sections prepared by both histochemical methods might offer a means of recognizing the sites of alpha-hydroxycarboxylic linkage in tissues. Sections from organs of 27 human necropsies were prepared in this manner and examined microscopically for staining variations. These examinations indicated that although the alpha-hydroxycarboxylic linkage might be attacked by lead tetraacetate, it could not be differentially localized in the face of the principal oxidizing action at the 1, 2-glycol linkage.

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The Nature of the Inhibitory Effect of Normal Human Gastric Juice on Heidenhain Pouch Dogs

WILLIAM O. SMITH,* ROBERT HOKE,** JEROME LANDY,*** RANWEL CAPUTTO,**** and STEWART WOLF.*****

Intravenous injections of dialyzed, lyophilized pooled normal human gastric content reconstituted in normal saline were given to Heidenhain pouch dogs. A dose of 1.0 mg./Kg. dog weight almost invariably produced inhibition in volume and acid secretion by the gastric pouches. A mean inhibition of 59 per cent from control values resulted from 25 injections in six animals. A significant inhibition was noted with 0.5 mg./Kg. dog weight. In contrast to the inhibition of volume and acidity of the pouch juice, an increase in total nitrogen and pepsin concentration was observed—the total excretion of these moietes remaining unchanged. This finding implies a selective inhibition of the parietal cells. Saline, human albumin, synovial fluid, ovarian cyst fluid and vitreous failed to produce such inhibition, implying specificity of the effect. However, saliva produced inhibition of the same degree as gastric juice. The inhibitory factor is not inactivated by boiling alone but is destroyed by boiling after acidification to a pH of 1.0-1.5. It appears likely that the inhibitory agent is either a protein of low molecular weight or a mucopolysaccharide.

The relationship of this substance found in human gastric juice to pernicious anemia, gastric carcinoma and peptic ulcer remains to be clarified.

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Pancreaticojejunostomy For Chronic Pancreatitis Motion Picture Made for American College of Surgeons

MERLIN K. DUVAL, R.,* and JOHN A. SCHILLING.**

This motion picture reviews the case history of a young housewife who has chronic relapsing calcareous pancreatitis, manifest by severe abdominal pain, diabetes, weight loss, and narcotic addiction. The surgical approach to the pancreatic duct is illustrated, as well as the manner in which pancreatic duct obstruction is demonstrated. The technical details involved in decompressing the obstructed pancreatic duct into the small intestine make up the majority of the film.

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Oklahoma Colloquy on Advances in Medicine

A portion of the first Oklahoma Colloquy on Advances in Medicine was reviewed in the previous issue. The entire proceedings will be published in book form.[1]

At the Colloquy, John Bland, M.D., from the University of Vermont discussed the "Central Nervous System Factors in Water and Electrolyte Metabolism." He presented evidence that the clinical and biochemical features of the hyperosmolar syndrome of cerebral damage may, at least sometimes, constitute an excessive but normal response to extreme water depletion. He did not believe that it was necessary to invoke a cerebral lesion as directly causative of the hyperosmolar syndrome. Severe dehydration can occur readily in the unconscious patient via fever, hyperventilation, sweating, inappropriate amounts of protein in tube feeding, and inadequate estimates of water needs. With advanced water depletion it is possible that secondary renal tubular damage may occur due to contracted plasma volume and inadequate renal blood flow. The hypernatremia, hyponaturia, azotemia, potassium depletion and even acidosis can be explained as a physiologic response to severe water depletion. He also discussed the role of the mesenchymal ground substance in water and electrolyte metabolism.

Robert Cooke, M.D., Department of Pediatrics, Johns Hopkins University, presented work concerning aldosterone and potassium metabolism. He concluded that the immediate effects of a load of sodium or potassium is an increase in the urinary excretion of the other ion. Depletion of the ion, the supply of which is limited, is prevented by alterations in the output of aldosterone. He discussed the mechanisms controlling the excretion of sodium and potassium and the secretion of aldosterone.

Arnold Relman, M.D., Department of Medicine, Boston University, discussed the changes in renal function and structure induced by potassium depletion. He presented histological evidence of vacuolar and hydropic degeneration in the renal tubules in animals and in man secondary to potassium depletion. The most characteristic functional defect was impairment of concentrating ability. This may be accompanied by polydipsia and polyuria. The structural and functional defect is reversed by the correction of potassium depletion. The most common cause of potassium deficiency is severe chronic diarrhea of any etiology, but hyperadrenalism as well as renal tubular disorders with urinary wasting of potassium have also frequently been at fault. The lesions due to potassium deficiency are frequently found together with other independent renal pathology. He also reviewed the newer concepts in the renal regulation of acid-base balance.

Allen Hennes, M.D., from the Medical Service of the Oklahoma City Veterans Hospital and the Department of Medicine, University of Oklahoma, presented a preliminary report of studies of intermediary metabolism in man. He utilized Carbon-14 labeled compounds. He showed that the altered glucose tolerance produced by adrenal steroids could be differentiated from that due to diabetes. After steroid administration there was an increase in blood pyruvate which was not present in diabetes mellitus. His studies also suggested that there may be a basic difference in juvenile and adult diabetics. He presented studies of lipid metabolism in diabetics and normals which suggested that there may be disorders of synthesis of fatty acids even in the well-controlled diabetic.

The review of this Colloquy will be completed in the next issue.

1. Oklahoma Colloquy on Fluid, Electrolyte, and Nutritional Balance, to be published.

Faculty News

Harris D. Riley, Jr., M.D., pictured above was appointed Professor and Chairman of Pediatrics on September 1, 1957. Doctor Riley was born in Clarksdale, Mississippi. He received his B.A. degree from Vanderbilt University in 1945 and M.D. from Vanderbilt in 1948. Doctor Riley interned at Baltimore City Hospitals and Johns Hopkins. He served a residency at Babies' and Children's Hospital, University Hospitals, Cleveland, Ohio. He was on the Pediatric Service at Vanderbilt University Hospital and served in the U.S. Air Force Medical Service. In 1954 Doctor Riley was recipient of a Fellowship in Microbiology from the National Foundation for Infantile Paralysis. He was Assistant Medical Director of the Poliomyelitis Center at Vanderbilt. Doctor Riley served as a consultant to Air Force and Army Hospitals in Tennessee and Kentucky, to the Middle Tennessee Tuberculosis Hospital, to the National Foundation for Infantile Paralysis and he was Chairman of the Rheumatic Fever Committee of the Middle Tennessee Heart Association.

Endocrinology Section

In this issue the work of the Endocrinology and Arthritis and the Dental Section will be described.

Doctor R. Palmer Howard heads this Section.

The effects of adrenal cortical steroids, gonadal steroids, and of thyroid hormone on the serum lipids and lipoproteins have been of particular interest and were outlined in the first report (see March, 1958, issue of the *Journal*).

Recent collaborative studies with the Cardiovascular Section have concerned themselves with the effects of dietary modifications on the response of the serum lipids and lipoproteins to the administration of the various steroids. Two interesting facts stand out from this work: 1) Carbohydrate added to the diet in the form of sugar will prevent changes in the lipids and lipoproteins ordinarily associated with the administration of adrenal cortical steroids and 2) a protein-free diet prevents the changes in serum lipids and lipoproteins ordinarily associated with the administration of androgens. The latter finding indicates that the level of protein intake may have a crucial and previously unsuspected role in the production of the type of fat patterns seen in men and therefore possibly in the pathogenesis of atherosclerosis. This work, which was presented by Drs. Furman and Howard at the Conference on Hormones and Atherosclerosis in Brighton, Utah, March 12th, 13th, and 14th, will be described more fully in the next issue of the *Journal*.

Another finding of interest has been that the protein-free diet prevents the appearance of creatinuria which generally results from the administration of methyltestosterone.

The mechanism of action of parathyroid hormone on bone and kidney tissues is the subject of a joint study by Doctor Howard, Doctor Marvin Shetlar, Department of Biochemistry in the School of Medicine, and Doctor Walter Joel, Department of Pathology, School of Medicine. This project is determining the sequence of changes in

serum glycoproteins, calcium, and phosphorus, and in the histochemistry of the kidney of rats receiving parathyroid extract. At the clinical level, the Endocrinology Section has worked in collaboration with the Cancer Section in determining the effects of parathyroid hormone on serum glycoproteins of hypoparathyroid patients. It is evident from this work that the parathyroid hormone not only induces phosphorus diuresis, but has a rather profound effect on connective tissues.

The comparative effects of oral estrogens on urinary gonadotropins form the subject of another project which is being carried on in this section.

For papers describing work accomplished in this section see References 1 and 2 (see also References 4, 5, 6, and 7, March 1958, issue of the *Journal*).

Dental Section

This Section, under the direction of Doctor Paul W. Goaz, D.D.S., is engaged in the microbiological study of the oral flora, which it is hoped will yield information relative to the cause and control or prevention of dental cavities.

The ability of the saliva to support the growth of oral bacteria under various endocrine conditions is one of the projects that has occupied the attention of this Section. It appears that the administration of at least one hormone is capable of depressing the ability of saliva to maintain growth. A vitamin has been identified in the saliva, by Doctor Goaz, that is required for growth by the predominant group of micro-organisms in the mouth. The same micro-organisms are those that are suspected of playing a role in the dental decay.

Doctor Goaz has also been examining a symbiotic relationship in the growth of the lactobacillus of the mouth, in which yeast organisms participate, by enhancing the production of lactic acid. The production of lactic acid by the lactobacillus is suggested as one of the means by which dental cavities may be produced.

For publications from this Section see References 3, 4, and 5.

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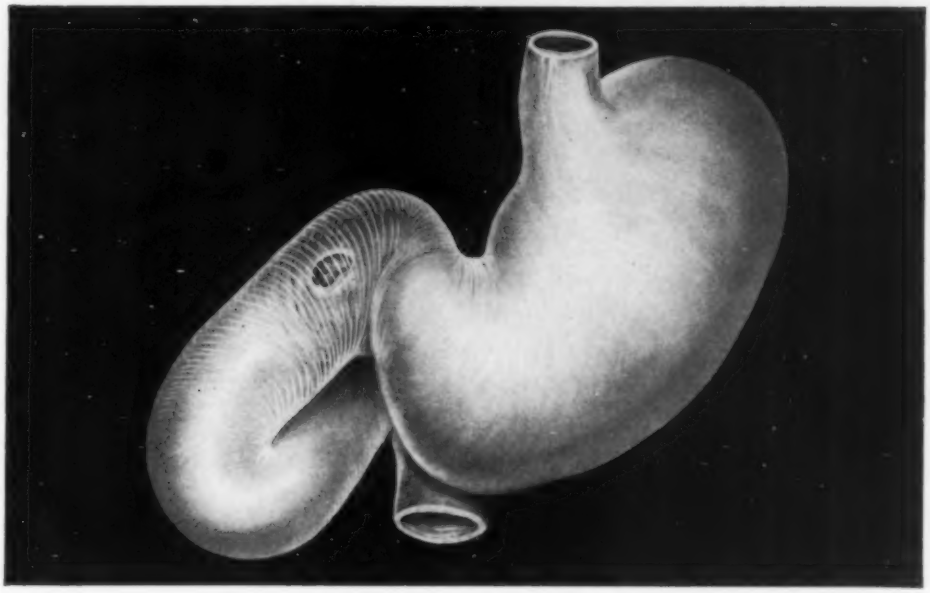
CONFIRMED THERAPEUTIC UTILITY



Pro-Banthine® "proved almost invariably effective in the relief of ulcer pain,

*in depressing gastric secretory volume and in inhibiting gastrointestinal motility."**

"Our findings were documented by an intensive and personal observation of these patients over a 2-year period in private practice, and in two large hospital clinics with close supervision and satisfactory follow-up studies."*

Among the many clinical indications for Pro-Banthine (brand of propantheline bromide), peptic ulcer is primary. During treatment, Pro-Banthine has been shown repeatedly to be a most valuable agent when used in conjunction with diet, antacids and essential psychotherapy.

Therapeutic utility and effectiveness of Pro-Banthine in the treatment of peptic ulcer are repeatedly referred to in the recent medical literature.

Pro-Banthine Dosage

The average adult oral dosage of Pro-Banthine is one tablet (15 mg.) with meals and two tablets at bedtime.

G. D. Searle & Co., Chicago 80, Illinois.
Research in the Service of Medicine.

*Lichstein, J.; Morehouse, M. G., and Osmon, K. L.: Pro-Banthine in the Treatment of Peptic Ulcer. A Clinical Evaluation with Gastric Secretory, Motility and Gastroscopic Studies. Report of 60 Cases, Am. J. M. Sc. *232*:156 (Aug.) 1956.

SEARLE

PRESIDENT'S LETTER

Another successful year has passed in the history of the Oklahoma State Medical Association, for which much credit is due to John Flack Burton and his competent staff who have guided us so well with keen judgment and sincerity.

There may have been a time in our history when such qualities were not so important. But along with our rapid growth there have come great changes in our social and economic order, in which the challenge to organized medicine has become much more demanding.

A few problems that are very familiar to you are compulsory health insurance, proposed Social Security legislation, Medicare, influence of organized labor on the Free choice of physicians, federal support of medical education—and a host of other issues equally as important. None of these are likely to be solved this year, or for many years, but it will be the aim of this Association to carry out your desires in these many serious matters to the very best of our collective abilities.

As I assume the duties as President of the Oklahoma State Medical Association I am extremely aware of the many responsibilities of this office. Any measure of success that I may have will be because we have all worked together as a team with one great purpose in mind—to uphold the highest standards of Medical Practice known.

E. G. Mohler, M.D.

President

Special Article

WHAT

Is Civil Defense and

WHO

Is Responsible?

JERRY RAGSDALE,

Director of Public Relations,
Oklahoma Civil Defense

This is the first of a series of articles designed to acquaint the medical profession with its role in the state civil defense program.

Civil Defense, in operation during or immediately after a disaster, is simply an extended form of Government—utilizing civilians. Often termed "Emergency Government", Civil Defense is merely the addition of trained auxiliary forces of volunteers to the established agencies of Government at all levels. There are several exceptions to the rule—

The SUGGESTED LOCAL CIVIL DEFENSE GUIDE pictured here has been described as a basic Civil Defense structure. It will be readily noted that most Civil Defense services have counterparts in local government. The major exceptions are:

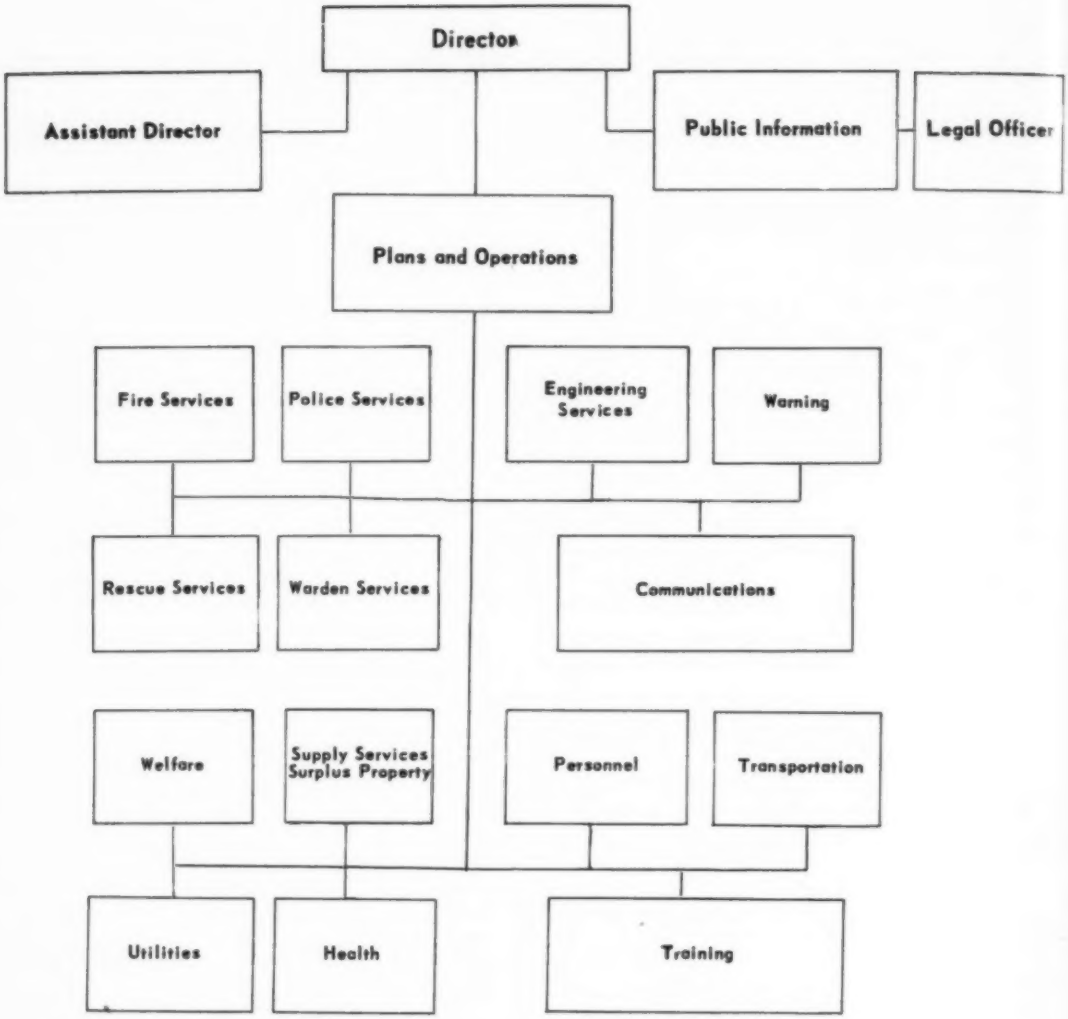
1. The Rescue Service
2. The Warden Service
3. The Public Information Service

The State Office of Civil Defense will train local Rescue Squads at no cost to localities. This specialized training is presently being conducted at the Oklahoma Civil Defense Training School at Stillwater, Oklahoma, at the Oklahoma State University. These same training facilities are available, free of charge, for local Civil Defense organizations on weekends. For the Warden Service, the State Civil Defense Headquarters provides Training Manuals, motion pictures and training kits, also at no cost to the local community. In most cities and towns the Public Information duties are assigned to the local newspaper editor or newspapermen.

The Director of Civil Defense of each political sub-division is either the Mayor or someone appointed by the Mayor to function in this capacity. The State Civil Defense Director supplies the City and County Director with recent and current information regarding various Civil Defense phases and services. Newly appointed City and County Directors receive current training manuals, educational publications and other Civil Defense material from time to time. Also, the State Headquarters supply local Directors with educational material for general distribution to the citizenry. This information and material is not mailed promiscuously to local directors, but only upon request of the local director; this saves thousands of dollars each year in postage and printing costs.

Local Civil Defense organizations can receive financial assistance to achieve their ultimate goal. Localities can receive matching funds, fifty-fifty (50-50), for purchase of Civil Defense equipment. The approved list of items includes more than two hundred (200) medical items in addition to items in many other classifications.

Through the State Civil Defense Headquarters, local Civil Defense Units are also eligible for surplus property. During time



of major disasters, cities and counties can receive outright grants of monies for the repairs of publicly owned facilities, roads, bridges, schools, municipal buildings, etc.

The responsibility for an active Civil Defense Program in any community rests upon the top elected officials, the Mayor or the County Commissioners as the case may be. These top, local-level, elected officials accept the responsibility for civil defense and disaster preparedness for their respective communities.

Speaking in terms of the doctor, one might say that civil defense is like the operating room, for coordination and organization are required in both instances. The surgeon corresponds to the local director—for he or she directs the operation whether it be a disaster operation or an appendectomy.

Civil Defense might be briefly described as non-military defense, an integral part of constituted government. It is the mobilization of the total resources of our communities, the emergency function of every element of our society including government, business, industry, school, church and the home at times when the regular duly constituted government is inadequate.

Medical News

A.M.A. Indorses 'Bricks-and-Mortar' Aid to Medical Schools

The American Medical Association has indorsed legislation for federal grants to help build and equip medical and dental schools, but has advised Congress that it opposes any financial incentive to increased enrollment that might tempt schools to accept more students than they could properly train. The Association's views were presented to Chairman Oren Harris (D., Ark.) of the House Committee on Interstate and Foreign Commerce, which has under consideration three bills on this subject.

On April 22 and 23, the committee's health subcommittee will conduct panel discussions on all aspects of federal assistance to medical and dental schools.

Doctor Blasingame's letter made these suggestions regarding amendments:

1. The Association has no objection to grants greater than 50 per cent of the cost of a project, if there is no financial incentive to increased enrollment. One bill *(H.R. 7841)* would limit the grant to 50 per cent, unless the school agreed to increase its freshmen enrollment by five per cent, in which case the school could receive up to two-thirds of the cost.

2. A proposed advisory federal council should have six of its members "from among leading medical authorities and public members should include persons skilled in the broad aspects of engineering, education, finance and architecture."

3. The definition of "schools of medisine" should be changed to eliminate schools of osteopathy from benefits. "Osteopathy is not a part of medicine, but rather is a cult the tenents of which are based on unscientific principles . . . "

Regarding the broad issue of aid to medical schools, Dr. Blasingame declared:

"Generally, the American Medical Association is opposed to federal aid in those areas where private citizens and local communities are capable of providing for themselves. We believe federal aid to be a dangerous device because of the degree of control and regulation which must necessarily accompany federal funds.

"We believe, however, that there is sufficient need for assistance in the expansion, construction, and remodeling of the physical facilities of medical schools to justify a one-time expenditure of federal funds, on a matching basis, provided of course, that maximum freedom of the schools from federal control is assured."

Regarding the bonus for increasing enrollment, Doctor Blasingame states:

"There are a number of features of *H.R. 7841* which in our opinion, if adopted, would be detrimental to medical education. First, we are concerned that the bill would needlessly establish a precedent for urging or inducing medical schools to increase their enrollment more rapidly than is justified by their facilities, personnel, and teaching material.

"Without an analysis of each individual school, it is quite possible that a five per cent increase in freshman enrollment at the present time would be detrimental to the quality of medical education or that such an increase in succeeding years would be unwise. We feel obligated to point out the dangerous principle which would be established, and to urge the committee to remove this unnecessary feature from the bill. We are certain that schools capable of increasing enrollment will do so without prompting."

26 Million Paid Oklahomans For Health Insurance Last Year

Benefit payments by insurance companies to the people of Oklahoma who are covered by health insurance policies reached a new high during 1957, the Health Insurance Institute reported recently.

In the period from January 1 through December 31, 1957, said the Institute, over $26 million was paid out to help cover the cost of hospital and doctor bills, and to replace income lost through sickness or disability. This represents a gain of 17.2 per cent over the 1956 figure of $22.2 million, and is based upon reports from insurance companies doing business in the state.

The rise in benefit payments in Oklahoma was also reflected in the figures for the nation as a whole, the Institute further noted. Persons protected against the expenses of hospital and medical care and treatment received a total of $2.5 billion in benefits from their insurance company policies in 1957, up 16.1 per cent over the previous year's high of $2.1 billion. By the end of the year, an estimated 70 million persons were covered by health cost policies bought from insurance companies, more than all other types of voluntary health plans combined.

The Health Insurance Institute is the central source of information for the nation's insurance companies serving the public through voluntary health insurance.

A.M.A. Asks Improved Medical Setup in CAA

American Medical Association has asked Congress to strengthen the Civil Aeronautics Administration medical department so it can properly discharge its responsibilities. A letter from A.M.A. General Manager Blasingame to Chairman Magnuson (D., Wash.) of the Senate Interstate and Foreign Commerce Committee points out that under present conditions the medical department is subordinated in the CAA and medical issues are being settled by the Civil Aeronautics Board, which does not have qualified medical personnel. The letter makes these points:

1. Physical standards for and medical evaluation of fliers "must be carried out by physicians experienced in aviation medicine and medical determination should be conducted by physicians . . . who have the necessary professional qualifications and experience."

2. There should be set up within CAA an office of civil air surgeon, with the chief directly responsible to the administrator, and a civil aeronautics medical research laboratory.

3. Rule-making authority for medical standards should be transferred from the CAB, which does not have a professionally qualified medical staff, to CAA.

Doctor Blasingame also pointed out that the A.M.A. now has a permanent and active committee on aviation medicine, and that the Association's policy is based on recommendations of this committee.

Doctor Alphin Resigns As Washington Office Director

Thomas A. Alphin, M.D., Director of the Washington Office of the American Medical Association since November 1955, has resigned, effective May 1, to become Associate Medical Director of the Equitable Life Assurance Society at the group's main office in New York City. He first came to the A.M.A. as Assistant Director of the Washington Office in 1953, a post he left six months in 1955 to serve as Assistant Dean, Faculty of Medicine, University of Missouri. In announcing the resignation, Doctor F. J. L. Blasingame, A.M.A. General Manager, commended Doctor Alphin for his forceful leadership and the contribution he has made to the medical profession while serving the A.M.A. in Washington. Doctor William J. Kennard, Deputy Director, has been named as Acting Director of the Office. He joined the Washington Office as an Assistant Director in 1955, after his retirement at Brigadier General in the Air Force Medical Corps.

Fount Richardson, M.D., Named President-Elect of AAGP

Fount Richardson, M.D., Fayetteville, Arkansas, was named President-Elect of the American Academy of General Practice at the Tenth Annual Scientific Assembly of the Academy held in Dallas March 24-27. Doctor Richardson will be installed as President at the Eleventh Annual Scientific Assembly of the Academy in San Francisco next March. He will succeed Holland T. Jackson, M.D., Ft. Worth, Texas.

Doctor Richardson has been active in the General Practice organization both in his home state of Arkansas and in the American Academy. He has represented Arkansas in the Congress of Delegates of the Academy and was Chairman of the Board at the time of his election as President-Elect.

He has been a member of the Southern Medical Association since 1934 and has held several offices in that organization including: Secretary of the Section on General Practice in 1951, Chairman of that Section in 1952, a member of the Council, representing Arkansas in 1954 and Chairman of the Council at this time, having been elected to that position at the Miami Beach meeting last November.

Legislation Proposed For Rural Clinic Grants

Senators Payne (R., Me.) and Flanders (R., Vt.) are sponsoring an amendment to Hill-Burton to allow private, non-profit associations or corporations to get up to $25,000 in federal funds on a matching basis for building and equipping diagnostic and treatment centers. Rural communities with population up to 15,000 would be eligible and the group need not be affiliated with a hospital as required for other Hill-Burton projects. The bill *(S. 3588)* was followed by one from Rep. Coffin (D., Me.) along similar lines. His bill, *H.R. 11826*, offers grants to a single town of not over 10,000 or a group of towns with no more than 15,000. One major difference with the Payne-Flanders bill is that in *H.R. 11826* the association or corporation would have to have a formal affiliation with a non-profit teaching hospital.

Oklahoma Association of House Staff Physicians to Meet May 23

The Fourth Annual Meeting of the Oklahoma House Staff Physicians will meet May 23 in the auditorium of the University of Oklahoma School of Medicine.

The purpose of the meeting is to stimulate research among the residents and interns and to give them an opportunity to present their work. Papers to be presented this year have been selected by a panel and an award will be given to the author of the best paper.

Two guest speakers for the meeting will judge the papers. Leonard F. Peltier, M.D., Ph.D., Professor of Surgery and Head of the Section of Orthopedic Surgery, University of Kansas Medical Center, Kansas City, Kansas, will speak on "Fat Embolism." Clinton Van Zandt Hawn, M.D., Pathologist-in-Chief at Mary Imogene Bassett Hospital, affiliate of Columbia University, Cooperstown, New York, will speak on "Histological and Surgiological Sequences in Experimental Hypersensitivity."

Survey Indicates Average of Five Visits a Year to Physician

Data from the National Health Survey, covering July-September of 1957, indicate residents of the United States see a physician at the rate of just under five visits a year, with only 10 per cent of the visits in the home. Other findings for the period:

Farm population used physician services at the rate of 3.6 visits per year, rural nonfarm population 4.5 visits and urban population 5.1 visits. Two-thirds of all visits involved diagnosis and treatment, and only one-third preventive care or other services. Indications were that 18 per cent of all people in the United States had consulted a physician in the last month, based on answers to survey questions during the three months last summer.

Survey information is obtained from household interviews in a continuous probability sampling of the population. Interviews in the period were conducted in about 9,000 households, comprising 28,500 persons.

Oklahoman Is Chairman Of Health Manpower Task Force

Max M. Van Sandt, M.D., a Public Health Service medical officer, has been assigned to the Office of Defense Mobilization where he will serve as Chairman of the Health Manpower Task Force. Immediately prior to his appointment, Doctor Van Sandt had served as the director of the Federal Civil Defense Administration Health Office in Battle Creek, Michigan.

Doctor Van Sandt, a native of Wewoka, Oklahoma, is a graduate of the University of Michigan and received his medical degree at the University of Cincinnati in 1930. He has done postgraduate work at the Menninger Clinic, Michael Reese Hospital, Cincinnati General Hospital, the University of Oklahoma School of Medicine, Mayo Clinic, the Institute for Federal Hospital Administrators and the Walter Reed Army Medical Center.

New Ruling on Medical Deductions

Internal Revenue Service has clarified conditions under which expenses of travel, undertaken at a doctor's direction, may be deducted from taxable income. An elderly taxpayer, who was suffering from arteriosclerotic heart disease, had been advised by his doctor to go to a predetermnied location where the temperature would be more suitable and where he could receive proper medical care. The physician also banned any further travel or sightseeing. Also, the physician advised the patient to have a nurse accompany him to administer the necessary injections and medications and to help him in and out of his wheelchair.

IRS ruled that because the travel was to alleviate specific ailments and was not for general improvement of health, the taxpayer was entitled to deduct his travel expenses and those of his nurse.

O.U. Medical School Alumni To Have Reunion at A. M. A. Meeting

Attention, all O. U. Medical School Alumni! We're going to have a reunion at the American Medical Association meeting in San Francisco in June! This will be in the form of a cocktail party on Monday evening, June 23rd, from 6:00 to 8:00 p.m. in the Olympic Club, 524 Post Street, San Francisco. The cost will be $4.00 per person, which will cover liquid refreshments and foods.

Advance registration through the local alumni office is desirable (825 N. E. 13th Street, Oklahoma City, phone FOrest 5-8331), but there will also be a booth near the registration desk in San Francisco where reservations for the party may be made.

New Tulsa Hospital Under Way

Pictured above is the architect's conception of the new eight million dollar St. Francis Hospital of Tulsa, for which official ground-breaking ceremonies were held on April 14th. At the same time it was announced that Harmon Construction Company of Oklahoma City would be general contractors for the project.

At the right may be seen the Chapel which will adjoin the first main unit of 295 beds. Construction on this phase of the project is expected to be completed in the Fall of 1959.

Long-range plans include a second unit of 295 beds, a convent, chaplain's quarters, and a medical research foundation.

The Hospital is being built by the William K. Warren Foundation of Tulsa, a non-profit institute created by gifts from Mr. William K. Warren, Tulsa oil executive and philanthropist, and Mrs. Warren.

The Hospital will be operated by a Roman Catholic Order, the Adorers of the Most Precious Blood of Wichita, Kansas.

SOCIAL SECURITY SAYS: "The following table shows the present tax rates and the scheduled increases: (on $4,200 wage base)

Calendar year	*Employee*	*Employer*	*Self-Employed*
1956	2 %	2 %	3 %
1957-59	2¼ %	2¼ %	3⅜ %
1960-64	2¾ %	2¾ %	4⅛ %
1965-69	3¼ %	3¼ %	4⅞ %
1970-74	3¾ %	3¾ %	5⅝ %
1975 and after	4¼ %	4¼ %	6⅜ %

In Other Words: A recent announcement stated that the Social Security system is in trouble. Benefit funds are melting as applications pour in at a rate in excess of Federal estimates. HEW Secretary M. H. Folsom was quick to say that expenditures may exceed income in 1959, but higher taxes in 1960 will cover the deficit. Check the chart above for proof that our children will be paying the bills for our benefits.

Prepared by the A.M.A.

Coming Meetings

Fourth Annual Meeting Oklahoma Association of House Staff Physicians*

Friday, May 23, 1958

Presiding: TED CLEMENS, M.D.

8:45 a.m. OPENING—*Earl Bricker, M.D.*, Chairman.

9:00 a.m. Intravenous Triglyceride Tolerance Test as a Measure of Triglyceride Clearance from the Serum—*Carl W. Smith, M.D.*, Oklahoma University Medical Center, Oklahoma City.

9:15 a.m. Long Term Follow Up of Surgical Treatment by Excision of Uncomplicated Fractures of the Radial Head—*Robert J. Cassidy, M.D.*, Oklahoma University Medical Center, Oklahoma City

9:30 a.m. Fat Embolism—*Leonard F. Peltier, M.D., Ph.D.*, Professor of Surgery and Head, Section of Orthopedic Surgery, University of Kansas Medical Center

10:15 a.m. An Analysis of the Treatment of Congenital Dislocation of the Hip—*Chauncey H. Dobson, M.D.*, Oklahoma University Medical Center, Oklahoma City

10:30 a.m. Intermission

Presiding: ROBERT W. DEAN, M.D.

10:45 a.m. Macrocephaly, Pseudopapilledema, and Multiple Hemangiomata; a New Gentically Transmitted Syndrome—*William R. Smith, M.D.*, Oklahoma University Medical Center, Oklahoma City

11:00 a.m. The Immediate Gastric Effects of Paraminosalicylic Acid—*R. L. Carpenter, M.D.*, Oklahoma University Medical Center, Oklahoma City

11:15 a.m. Successful Kidney Homotransplantation in Identical Twins with Preliminary Studies on Functional Capacity of Homotransplanted Kidney—*H. Earl Ginn, M.D.*, Oklahoma University Medical Center, Oklahoma City

11:30 a.m. Pneumatosis Cystoides Intestinalis — *Robert Fagella, M.D.*, Oklahoma University Medical Center, Oklahoma City

11:45 a.m. The Use of Chlorpropamide as an Oral Hypoclycemic Agent—*Carman Bloedow, M.D.*, Oklahoma University Medical Center, Oklahoma City

12:00 p.m. The Problem of Massive Upper GI Hemorrhage with Particular Emphasis on Peptic Ulceration: A Review of Cases in the University Hospital during the Years 1948 through 1957—*Frank Howard, M.D.*, Oklahoma University Medical Center, Oklahoma City

12:15 p.m. Luncheon

Presiding: WILLIAM F. EWING, M.D.

1:30 p.m. The Relation of Emotional State to Renal Excretion of Fluids and Electrolytes in Patients with Congestive Heart Failure—*Robert N. Barnes, M.D.*, Oklahoma University Medical Center, Oklahoma City

1:45 p.m. Renal Blood Flow Determined by Use of Radioiodinated Serum Albumin and an Externally Placed Scintillation Detector—*Gunnar Sevelius, M. D.*, Oklahoma University Medical Center, Oklahoma City

2:00 p.m. Histological and Serological Sequences in Experimental Hypersensitivity—*Clinton Van Zandt Hawn, M.D.*, Pathologist-in-Chief, Mary Imogene Bassett Hospital, Columbia University, Cooperstown, New York

2:45 p.m. Postpartum Hysterectomy: Five Year Survey—*Harold C. Wood, M.D.*, St. John's Hospital, Tulsa

3:00 p.m. Conditions Influencing Colonic Mucosal Blood Flow—*Jack D. Welsh, M.D.*, Oklahoma University Medical Center, Oklahoma City

3:15 p.m. Intermission

Presiding: VAN HOWARD, M.D.

3:30 p.m. Technique of Exchange Transfusion and Results Obtained in Erythroblastosis Fetalis—*Leoncio Villarreal, M.D.*, St. John's Hospital, Tulsa

3:45 p.m. Homoplastic Tooth Transplantation Techniques in the Syrian Hamster—*C. Herman Reece, D.D.S.*, Oklahoma University Medical Center, Oklahoma City

4:00 p.m. Munchausen Syndrome — *Everett R. Rhoades, M.D.*, Oklahoma University Medical Center, Oklahoma City

4:15 p.m. Psychodynamic and Psychophysiological Aspects of Pseudocyesis—*Phillip E. Green, M.D.*, Oklahoma University Medical Center, Oklahoma City

4:30 p.m. Evaluation of 100 Partial Gastric Resections for Peptic Ulcerations of the Stomach and Duodenum—*A. Paul Compton, M.D.*, St. John's Hospital, Tulsa

4:45 a.m. Scalene Node Biopsy—*W. Lee Honska, M.D.*, and *Tom Johnson, M.D.*, Oklahoma University Medical Center, Oklahoma City

5:00 p.m. Difficulties in Differential Diagnosis Between Chorioadenoma Destruens and Choriocarcinoma—*William E. Hood, Jr., M.D.*, St. Anthony Hospital, Oklahoma City

*Since the panel who selects the papers to be presented does not always know to whom credit should be given, omissions may have been made on the program. Many physicians have worked on these papers and will be given credit at the time of presentation.

Postgraduate Division
UNIVERSITY OF OKLAHOMA MEDICAL CENTER
SHORT COURSE SERIES

June 11—Surgery—Surgical Diagnosis and Problem Clinic.

The course is designed so physicians may attend four hours of formal instruction in the above field while spending only one-half day from their office. It is approved for credit by the Oklahoma Academy of General Practice.

Time 3:30 to 8:30 p.m.

Place: Room 120, Medical School Building.

Registration: $3.50 per session; includes dinner, Hospital Cafeteria. Mail registration to office of Postgraduate Instruction.

HILLCREST MEDICAL CENTER
1653 East 12th St., Tulsa, Okla.

May 27—Basic GI Physiology, J. W. H. Smith, Lecturer.

June 10—Physiological Basis of Liver Function Tests, E. G. Larsen, Lecturer.

June 24—Alimentary Reserve: the malabsorption syndrome, J. W. H. Smith, Lecturer.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

Applications for certification (American Board of Obstetrics and Gynecology), new and reopened, Part I, and requests for re-examination Part II, are now being accepted. All candidates are urged to make such application at the earliest possible date. Deadline date for receipt of application is September 1, 1958. No applications can be accepted after that date.

Candidates for admission to the Examinations are required to submit with their application, an unbound 8½ x 11 typewritten list of all patients admitted to the hospitals where they practice, for the year preceding their application, or the year prior to their request for reopening of their application.

Current Bulletins outlining present requirements may be obtained by writing to the Secretary's office: Robert L. Faulkner, M.D., 2105 Adelbert Road, Cleveland 6, Ohio.

NINTH SEMINAR ON THE WORLD HEALTH ORGANIZATION

Minneapolis, Minnesota **May 24-June 4, 1958**

The Ninth Seminar on the World Health Organization will meet simultaneously with the Eleventh World Health Assembly in Minneapolis from May 26 to June 4, 1958. Speakers for this seminar will be either officials from WHO regional offices or medical researchers qualified to report on the newest developments in their fields.

Applications should be addressed to: Committee on General Arrangements For WFUNA-WHO Seminar on World Health, 2808 West River Road, Minneapolis 6, Minnesota.

UNIVERSITY OF COLORADO MEDICAL CENTER
1958 Postgraduate Courses
Denver, Colorado

THERAPEUTIC EXERCISE*

May 8-9, 1958

A postgraduate course for the Physical therapist and the Occupational therapist will be sponsored by the Department of Physical Medicine and Rehabilitation and the Office of Postgraduate Medical Education May 8-9, 1958 at the University of Colorado Medical Center.

CLINICAL HEMATOLOGY*

June 16-21, 1958

Matthew Block, Ph.D., M.D., Associate Professor of Medicine and Kurt N. von Kaulla, M.D. will direct a course in Clinical Hematology for Internists and Pathologists at the University of Colorado Medical Center, June 16-21, 1958. Registration is limited to 12 students and the fee is $100.

DERMATOLOGY FOR GENERAL PRACTITIONERS*
July 10, 11, 12, 1958

A postgraduate refresher course in Dermatology for General Practitioners will be held at the Colorado General Hospital and Fitzsimons Army Hospital, July 10, 11, 12, 1958.

THE PREVENTION AND MANAGEMENT OF ATHLETIC INJURIES*

August 25, 26, 27, 1958—Denver, Colorado

Don H. O'Donoghue, M.D., Orthopedic Consultant, University of Oklahoma; Thomas B. Quigley, M.D., Assistant Clinical Professor of Surgery, Harvard Medical School; Joseph P. Dolan, Ph.D., Research Professor of Physical Education, North East Missouri State Teachers College; Kenneth Rawlinson, Chief Trainer, University of Oklahoma and Jack Rockwell, Chief Trainer, University of Colorado will be speakers for this program.

*For detailed program and further information, write to: The Office of Postgraduate Medical Education, The University of Colorado Medical Center, 4200 East Ninth Avenue, Denver 20, Colorado.

AMERICAN GOITER ASSOCIATION
San Francisco, California
June 17, 18, 19, 1958

The 1958 meeting of the American Goiter Association will be held in the St. Francis Hotel, San Francisco, California, June 17, 18 and 19, 1958. The program for the three day meeting will consist of papers and discussions dealing with the physiology and diseases of the thyroid gland.

Hotel reservations must be secured by writing to Goiter Housing Bureau, Room 300, 61 Grove Street, San Francisco, California and be accompanied by a deposit of $10.00 per room.

Organization News

Six Oklahoma Physicans To Participate in A.M.A. Meeting

Six Oklahoma physicians will participate in the 107th annual meeting of the American Medical Association June 23-27 in San Francisco. Those participating and their subjects will be: Don H. O'Donoghue, M.D., Oklahoma City, "Indications for Surgical Treatment of Ligament Injuries of the Knee" in the Symposium on Sports and Sport Injuries, Section on Miscellaneous Topics, June 26; Louis J. West, M.D., Oklahoma City, "Sleep Deprivation" in Section on Nervous and Mental Diseases, June 25; Herbert Kent, M.D., Oklahoma City, "Rehabilitation Potential in Quadriplegic Teenagers" in Section on Physical Medicine, June 25; and Jean S. Felton, M.D., Oklahoma City, "Hospital Employees: Corridor Consultations or Health Maintenance?" in the Symposium on Occupational Medicine for the Private Practitioner, Section on Preventive Medicine, June 24.

Also participating will be: Stewart Wolf, M.D., Oklahoma City, motion picture on "Human Gastric Function" in Motion Picture Program and Leo Lowbeer, M.D., Tulsa, exhibit on "The Pathology of Brucellotic Osteomyelitis" in Section on Pathology and Physiology, Section Exhibits.

Meeting to Draw 15,000 Physicians

This convention is the largest medical meeting in the world, attracting 15,000 physicians. It offers an opportunity for doctors to catch up on hundreds of aspects of rapidly-changing medical knowledge. Five hundred doctors will present scientific papers or participate in symposiums and discussion groups.

There will be 325 scientific exhibits in the San Francisco Civic Auditorium. In addition, 285 technical exhibits will be displayed in the new Plaza Exhibit Hall by pharmaceutical houses, medical equipment firms, and other manufacturers.

The House of Delegates, the A.M.A.'s policy-making body, will meet throughout the week in the Sheraton-Palace Hotel, headquarters for the meeting. Scientific sessions will be held in the auditorium, other rooms of the Civic Center, and some hotels.

Medical color television programs will emanate from San Francisco Hospital. A special event will be the premiere showing of a motion picture on traumatic neuroses made by the A.M.A. and the American Bar Association. The third in a series dealing with the medicolegal problems, the movie will be shown Wednesday evening at the Sheraton-Palace.

Another special feature will be a 90-minute closed circuit television Grand Rounds, also on Wednesday evening. Part of it will cover the highlights of the meeting and the rest will deal with diabetes. The latter part will emanate from the University of California School of Medicine. It will be viewed by physicians in Boston, Chicago, Cleveland, Kalamazoo, Philadelphia, New York, and Syracuse.

The scientific session will open Monday afternoon with a panel discussion on the management of the severely injured patient. Tuesday morning's session will be a general review of the hazards of certain therapeutic agents. The winner of the Goldberger Award, given annually by the A.M.A. for outstanding achievement in the field of clinical nutrition, will speak at noon Tuesday.

In addition to awarding the Goldberger medal Monday at its opening session, the House of Delegates will also elect a physician to receive one of medicine's highest honors, the Distinguished Service Award.

David B. Allman, M.D., Atlantic City, N.J., retiring president of the A.M.A., and his successor, Gunnar A. Gunderson, M.D., LaCrosse, Wis., will address the opening session of the house. Dr. Gundersen will be inaugurated Tuesday evening.

E. C. Mohler, M.D., Ponca City, incoming President of the OSMA, addresses recent Doctor-Lawyer meeting in Cushing. Pictured left to right, Clifford M. Bassett, M.D., Cushing, Mohler, Robert D. Looney, Oklahoma City, and Sterling Grubbs, Cushing.

Oklahoma State Future Nurses' Day Held in Tulsa

The second annual meeting of the Oklahoma State Future Nurses' Day was held in the Edison High School, Tulsa, April 5, 1958. The day-long program was planned around the theme "Hands to Serve."

Ben H. Nicholson, M.D., Oklahoma City, Editor of *The Journal* of the Oklahoma State Medical Association gave the main address which was entitled "Hands to Serve." Others on the program were James Maxwell, Mayor-elect of Tulsa, Mrs. John Powers Wolff, president of the Auxiliary to the Oklahoma State Medical Association; and Mrs. Rhobia Taylor, field consultant for the National League for Nursing.

A motion picture, "My Cap Is My Crown" was shown. Among other features of the day were a style show by student nurses and a play presented by the Oklahoma Students Nursing Association which dramatized students in nurses training.

The Tulsa event was sponsored jointly by the Auxiliary to the Oklahoma State Medical Association, the Oklahoma League for Nursing and the Oklahoma State Nursing Association.

Payne-Pawnee Society Holds Doctor-Lawyer Dinner

The Payne-Pawnee County Medical Society and members of the respective Bar Associations met for dinner at the Cushing Hotel on April 10. It was the second annual meeting of the combined groups, the purpose of which is to develop a better appreciation of the problems of each profession.

Principal speaker of the evening was attorney Robert D. Looney of Oklahoma City. Mr. Looney of the Oklahoma Bar Association's Medical Liaison Committee, delivered a talk, "The Great Divorce," which pointed out that lack of mutual understanding between the two professions was largely responsible for recent depreciation of interprofessional relations.

Following Mr. Looney, E. C. Mohler, M.D., the President-Elect of the Oklahoma State Medical Association, brought official greetings to the group and endorsed efforts to strengthen harmonious relations between the two professions.

The dinner was preceded by a social hour, also held at the Cushing Hotel. Local arrangements for the meeting were handled by Clifford M. Bassett, M.D.

Two Civil Defense Programs Scheduled in San Francisco

Two medical civil defense meetings will be held in San Francisco immediately preceding the American Medical Association's 107th Annual Meeting. On June 19-20, the 12th Naval District will sponsor a symposium on "Medical Problems of Modern Warfare and Civil Defense" at the U.S. Naval Radiological Defense Laboratory, and on June 21 the A.M.A.'s Council on National Defense will sponsor its 6th Annual National Medical Civil Defense Conference in the Sheraton-Palace Hotel. Doctor David B. Allman, A.M.A. president, and Frank W. Barton, secretary, A.M.A. Council on National Defense, will speak at the Naval symposium on the plan and activities of organized medicine for medical preparedness in disasters or in the event of all-out war.

Reiff Represents State

William H. Reiff, M.D., Oklahoma City physician, will represent Oklahoma when he speaks, June 21 at the Council on National Defense. Welcoming the participants to this meeting will be Doctor Gunnar Gundersen, A.M.A. president-elect. The current federal civil defense program, including the national plan for mobilization of resources (personnel, facilities, supplies) will be outlined during the morning session by officials of federal governmental agencies involved. Also scheduled for the morning session will be a discussion of the threat and impact of newer weapons and delivery systems by an outstanding military planner, and a report on the legislative program now pending before congress for a national survival plan by the Hon. Chet Holifield, U.S. congressman, 19th district of California.

During the afternoon, the Surgeons-General of the Army, Navy, Air Force and Public Health Service will discuss the civil defense role and responsibilities of civilian physicians. Two other subjects to be covered include the radioactive fall-out problem and the feasibility of a national shelter program.

All physicians interested in civil defense planning are urged to attend these two worthwhile meetings.

Two Standard Insurance Forms Developed by Insurance Committee

The Insurance Committee of the Oklahoma State Medical Association recently announced the development of a revised version of the OSMA Standard Insurance Reporting Form and also released a Standard Physicians Statement Form, a new product of their standardization efforts.

A sub-committee, under the leadership of Clayton E. Woodard, M.D., Drumright, was asked to review the inequities of the standard reporting form initiated by the committee on December 1, 1956. Although the original form was generally accepted by most insurance companies and physicians, there was enough valid criticism to prompt further refinement.

A national standardized claim form has been sorely needed for many years, not only for physicians, but also for hospitals and the insured. The Health Insurance Council has had two "approved" forms for a number of years; one for individual insurance claims and one for group insurance claims. These forms, which are for physicians only, are on a legal size paper and allow any insurance company which might adopt them so many options that the goal of standardization has not been reached. The Council forms have been little used on a local basis and they are generally unacceptable nationally.

Doctor Woodard's sub-committee felt that the real need could be met only by developing a single claim form that could be used by the physician, hospital and the insured and also which would be acceptable for either group or individual claims. Since group claims ordinarily call for less information than individual claims, it was felt that satisfaction of the requirements for the individual claim would also suffice for the group type.

The sub-committee further defined the problem by recognizing that the claim form should be one that could be utilized for reporting all types of care, such as surgery, medical treatment, laboratory, accident and pregnancy; whether treated at home, office, clinic or hospital. It should be a form which can be utilized for reporting disability and/

or time off from work, if that is all that is needed. The utility of the ideal form should not be limited to general practice or, for that matter, to any speciality group; it should be flexible enough to provide for all medical care claims, including tissue examinations or any other laboratory procedure which may be covered by the policy.

With these factors in mind, the sub-committee met numerous times with representatives of the Association of Health and Accident Insurors of Oklahoma and the Oklahoma Hospital Association as well as with its parent committee. A standard claim form was subsequently developed which will satisfy the needs of the physician, hospital and insured on a single sheet of 8½" x 11" paper that conforms to standard filing cabinets. The physician attaches his itemized statement to the claim form and the hospital may also attach their statement if they do not elect to complete the standard form.

Advantages Outlined

Doctor Woodard pointed out the advantages of the new form as follows:

1. It has been formally endorsed by the Association of Health and Accident Insurors of Oklahoma and is expected to be approved by all companies licensed in Oklahoma.

2. All necessary information can be given on two sheets of paper, one of which will be the physician's statement.

3. It is adaptable to standard filing facilities.

4. Each item is numbered to facilitate the dictation of reports. The easily-provided information, on a standardized basis, will be sufficient to settle most claims without further correspondence and result in less paperwork for the physician.

5. The format is such that a double-space typewriter setting will automatically match each item line on the form and save secretarial time.

6. There is no need to complete the section regarding disability unless the patient indicates loss of time benefits in his section.

7. An authorization for the insurance company to pay directly to the physician is provided.

Option to Review Records

Item number 18 has been inserted to save the physician time and trouble at a later date. Many hospitals will refuse to expose the case records of contested or questioned claims without the attending physician's approval. It is then necessary for the insurance company to contact the physician, frequently in his office, in order to gain consent. Consequently, this provision gives the physician an option, at the time of filing the claim, regarding the authorization to review case records.

90 Per Cent Acceptable

All of the insurance companies that participated in the formation of the new claim form have agreed that the information asked is sufficient to settle at least 90 per cent of the claims without further correspondence. Prompt settlement of the claim and accompanying patient-goodwill may be achieved by completing each item on the form as requested. The Insurance Committee urges 100 per cent physician-utilization of the new form in order to insure the success of the simplification program. Insurance companies who refuse to accept the form should be reported to the committee so that follow-up coordination may be initiated.

It was pointed out by Doctor Woodard that the new form does not replace large group claim forms from companies such as Metropolitan, Aetna and Blue Shield. Their forms are already simple to complete and generally acceptable. The sub-committee is hopeful, however, that if the new form were submitted for a group claim, the company would accept it for proof of loss.

Standard Statement Offered

A second new form is OSMA Form 102, which is the statement for services rendered. It will require a minimum of time and effort to complete and is as simple as the popular Blue Shield statement. The insurance companies comprising the membership of the Association of Health and Accident Insurors have indicated their acceptance of the new statement form.

Although the member companies of the local insurance association have adopted the standard reporting form, it will still be nec-

STANDARD CLAIM FORM

APPROVED BY THE OKLAHOMA STATE MEDICAL ASSOCIATION AND THE ASSOCIATION OF HEALTH AND ACCIDENT INSURORS OF OKLAHOMA

INSURANCE COMPANY | ADDRESS

TO:

ATTENDING PHYSICIAN'S REPORT

1. PATIENT'S NAME	2. ADDRESS	3. AGE

4. DIAGNOSIS (EXPLAIN COMPLICATIONS)

5. ADDITIONAL DIAGNOSES (CHRONIC DISEASE OF DEFECT FOUND DURING PRESENT TREATMENT)

6. DATE OF ONSET	7. DATE FIRST CONSULTED	8. DUE TO PREGNANCY ☐ YES ☐ NO	9. COMPENSATION CASE ☐ YES ☐ NO	10. WHEN, IN YOUR OPINION, DID THE PATIENT FIRST BECOME AWARE OF SOME SYMPTOM OF THIS CONDITION?

11. SURGICAL OR OBSTETRICAL PROCEDURES (DESCRIBE)

12. IF HOSPITALIZED, NAME AND ADDRESS OF HOSPITAL	13. DATE ADMITTED	14. DATE DISCHARGED

15. NAME AND ADDRESS OF OTHER PHYSICIANS WHO HAVE TREATED PATIENT FOR THIS ILLNESS OR INJURY

COMPLETE IF PATIENT HAS INDICATED LOSS OF TIME BENEFITS

16. TOTAL DISABILITY:
FROM _____ TO _____
17. PARTIAL DISABILITY:
FROM _____ TO _____
FROM _____ TO _____

AUTHORIZATION TO PAY PHYSICIAN

I HEREBY AUTHORIZE PAYMENT DIRECTLY TO THE ATTENDING PHYSICIAN FOR THIS ILLNESS OR INJURY, OF THE PHYSICIAN'S OR SURGEON'S BENEFITS OTHERWISE PAYABLE TO ME, BUT NOT TO EXCEED MY INDEBTEDNESS TO SAID PHYSICIAN. I UNDERSTAND I AM FINANCIALLY RESPONSBLE TO THE PHYSICIAN FOR CHARGES NOT COVERED BY THIS ASSIGNMENT.

DATE _____ SIGNED _____ (INSURED)

18. THE HOSPITAL ☐ IS ☐ IS NOT AUTHORIZED TO FURNISH, WITH THE INSURED'S CONSENT, ANY INFORMATION REGARDING THIS CLAIM, REQUESTED BY THE _____ INSURANCE COMPANY

DATE _____ SIGNED _____ PHYSICIAN DEGREE

ADDRESS _____ STREET CITY AND STATE

NOTE TO PHYSICIAN: PLEASE SUBMIT YOUR ITEMIZED STATEMENT FOR THIS CLAIM. OKLAHOMA PHYSICIANS MAY USE OSMA FORM 102.

INSURED'S STATEMENT

POLICY NO. _____ TO BE COMPLETED PERSONALLY BY THE INSURED. YOUR DOCTOR OR HOSPITAL IS NOT RESPONSIBLE FOR COMPLETION CLAIM NO. _____

NAME	AGE	ADDRESS

1. IF ACCIDENT: GIVE DATE	DESCRIBE HOW AND WHERE IT HAPPENED

2. IF SICKNESS: GIVE NATURE OF COMPLAINTS

3. DATE YOU FIRST NOTICED SYMPTOMS OR REALIZED YOU WERE GETTING SICK	4. DATE FIRST SAW A DOCTOR
5. HAVE YOU HAD SYMPTOMS OR TREATMENT FOR THIS SICKNESS BEFORE	6. WHEN?

7. MEDICAL TREATMENT RECEIVED DURING LAST TWO YEARS
(SICKNESS) (DOCTOR) (YEAR)

8. ARE YOU MAKING A CLAIM FOR LOSS OF TIME? ☐ YES ☐ NO
IF "YES": DATE FIRST STOPPED WORK: FIRST DATE RETURNED TO WORK:

AUTHORIZATION

I HEREBY AUTHORIZE ANY HOSPITAL OR PHYSICIAN TO FURNISH TO THE _____ INSURANCE COMPANY OR ITS REPRESENTATIVE OR PERMIT SAID INSURANCE COMPANY OR ITS REPRESENTATIVE TO REVIEW ANY INFORMATION REQUESTED WITH RESPECT TO ANY ILLNESS OR ACCIDENT, MEDICAL HISTORY OR COPIES OF HOSPITAL AND MEDICAL RECORDS. A PHOTOSTATIC COPY OF THIS AUTHORIZATION SHALL BE CONSIDERED AS VALID AS THE ORIGINAL. I DECLARE THE ABOVE ANSWERS AND STATEMENTS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE _____ SIGNED: _____ INSURED

FORM OSMA 101

essary for physicians to maintain their own stock of these forms in addition to the new statement form.

Both the claim form and statement form will be available, on a mail order basis, from the Transcript Company, Box 191, Norman, Oklahoma. Prices for the claim form (OSMA Form 101) are: 70 cents for a pad of 50, $1.95 for three pads, $3.75 for six pads and $6.60 for twelve pads. The state-

PLEASE ATTACH TO COMPLETED INSURANCE CLAIM FORM

STATEMENT FOR PROFESSIONAL SERVICES RENDERED

APPROVED BY THE OKLAHOMA STATE MEDICAL ASSOCIATION

PHYSICIAN'S NAME	PATIENT'S NAME
ADDRESS	

COMPLETE FOR MEDICAL CARE ONLY: AT HOSPITAL, HOME, OR OFFICE
GIVE THE DATES OF TREATMENT BY INSERTING MONTH AND YEAR. INDICATE EACH DAY'S TREATMENT BY USING THE FOLLOWING CODE:
H—HOSPITAL V—HOME O—OFFICE OR CLINIC

MONTH AND YEAR	DAYS OF MONTH																												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

PLEASE STATE YOUR USUAL FEE FOR

HOSPITAL VISIT	HOME VISIT	OFFICE VISIT
$	$	$

TOTAL CHARGES FOR ALL TREATMENTS SHOWN ABOVE $

COMPLETE FOR ALL OTHER TYPE CARE: SURGERY, OBSTETRICS, ANESTHESIA, X-RAYS, LABORATORY, OR OTHER SPECIAL FEES.
PLEASE DESCRIBE IN ITEMIZED MANNER.

DATE	DESCRIPTION	CHARGE
		$

OSMA FORM 102

SIGNED_____
PHYSICIAN DEGREE

THIS PORTION MAY BE DETACHED: NOTE TO PHYSICIANS:

IF ANY OF THE FOLLOWING PROCEDURES ARE INVOLVED, IT WILL BE VERY HELPFUL TO THE INSURANCE COMPANY, IN DETERMINING THE PROPER BENEFIT, IF THE INFORMATION REQUESTED BELOW IS INCLUDED.

1. SURGICAL CASES: DESCRIBE OPERATION, I.E., IF HYSTERECTOMY, INDICATE IF TOTAL OR SUB-TOTAL.
2. OBSTETRICAL CASES: STATE WHETHER NORMAL DELIVERY, CESAPIAN SECTION, OR MISCARRIAGE. IF MISCARRIAGE, GIVE GESTATION TIME AND WHETHER D&C PERFORMED.
3. ORTHOPEDIC CASES: SITE INVOLVED, STATE WHETHER FRACTURED, DISLOCATED OR DISEASED. IN FRACTURES, STATE TYPE OF FRACTURE, WHETHER DISPLACED OR NOT, AND WHETHER REDUCTION WAS OPEN OR CLOSED METHOD.
4. BURN CASES: DESCRIBE LOCATION, EXTENT AND DEGREE. STATE WHETHER SKIN-GRAFTED OR NOT.
5. LACERATIONS: DESCRIBE LOCATION, SIZE, DEPTH AND APPROXIMATE NUMBER OF SUTURES.
6. X-RAYS: STATE IF ACCIDENT CASE. GIVE SITE OF X-RAYS.
7. ANESTHESIA: STATE WHETHER GENERAL, SPINAL, CAUDAL OR LOCAL.

ment form (OSMA Form 102) may be purchased for 80 cents for one pad, $2.25 for three pads, $4.35 for six pads and $7.80 for

(Continued on Page 286)

Low Dosage KYNEX for G.U. Infections

Unusual Antibacterial and Anti-infective Properties. More rapid absorption . . . higher and better sustained plasma concentrations . . . more soluble in acid urine than other sulfonamides . . . freedom from crystalluria and absence of significant accumulation of drug, even in patients with azotemia. [1]

Unprecedented Low Dosage. Less sulfa for the kidney to cope with . . . yet fully effective. A single daily dose of 0.5 to 1.0 Gm. (1 to 2 tablets) maintains higher plasma levels than 4 to 6 Gm. daily of other sulfonamides —a notable asset in prolonged therapy. [2]

New Control Over Sulfonamide-sensitive Organisms. KYNEX maintains the prolonged, high tissue concentrations of primary importance in treatment of urinary infections . . . a therapeutic asset toward preventing manifest pyelonephritis as a complication of persistent bacteriuria during pregnancy and puerperium. Maintenance of sterile urine in such patients was accomplished with 1 tablet of KYNEX daily. [3]

KYNEX*

Sulfamethoxypyridazine Lederle

Dosage: The recommended adult dose is 1 Gm. (2 tablets) the first day, followed by 0.5 Gm. (1 tablet) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours. Dosage in children, according to weight; i.e., a 40 lb. child should receive ¼ of the adult dosage. It is recommended that these dosages not be exceeded.

KYNEX—WHEREVER SULFA THERAPY IS INDICATED

Tablets: Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

Syrup: Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

References: 1. Grieble, H. C. and Jackson, G. G.: Prolonged Treatment of Urinary-Tract Infections with Sulfamethoxypyridazine. *New England J. Med.* 258:1-7, 1958. 2. Editorial *New England J. Med.* 258:48-49,1958. 3. Jones, W. F., Jr. and Finland, M., Sulfamethoxypyridazine and Sulfachloropyridazine. *Ann. New York Acad. Sc.* 60:473-483, 1957.

*Reg. U. S. Pat. Off.

Lederle

LEDERLE LABORATORIES
a Division of
AMERICAN CYANAMID COMPANY
Pearl River, New York

Regional Meeting of the American Heart Association Held in Tulsa

Advances in heart research were discussed recently by Robert W. Wilkins, M.D., (left) of Boston, Massachusetts, president of the American Heart Association, and E. C. Mohler, M.D., (right) president-elect of the Oklahoma State Medical Association. The occasion was a nine state West Central Regional meeting of the American Heart Association held in Tulsa. Doctor Mohler attended the meeting in his dual capacity of Oklahoma Medical Association president-elect and a member of the Executive Committee of the Oklahoma State Heart Association.

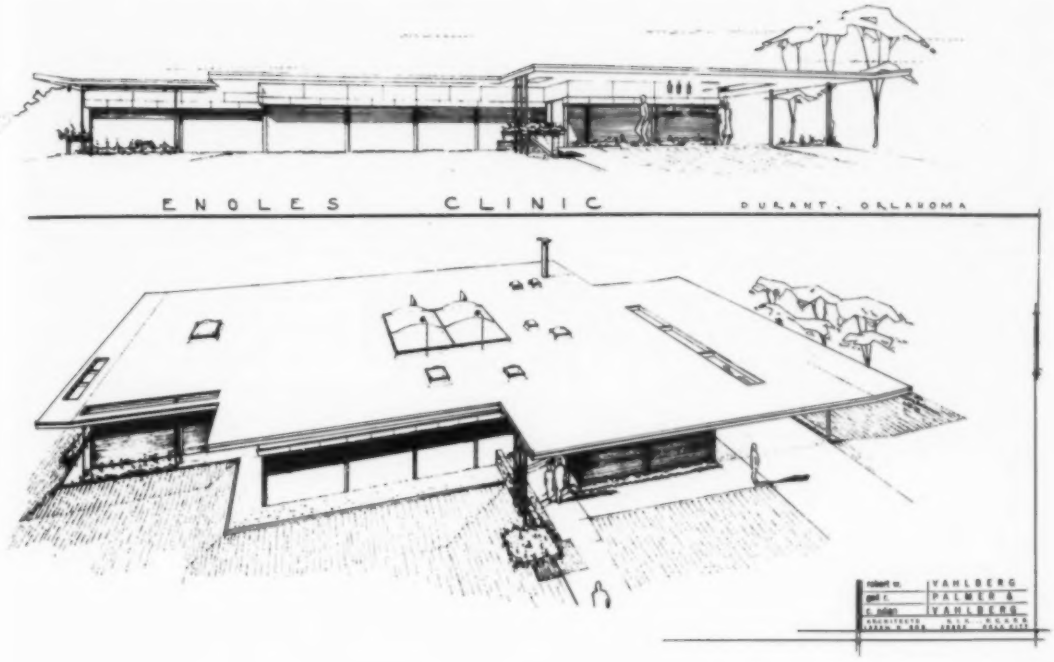
Two Standard Insurance Forms

(Continued from Page 283)

twelve pads. An advertisement and order blank appear on page 293.

Doctor Woodard pointed out that physicians may continue to use previously accepted standard claim forms until their stock is depleted. The insurance companies who helped develop the new forms have indicated that they will continue to accept the old forms until the supply is exhausted.

"Members of the organizations who collaborated in the development of these forms are hopeful that their efforts will make Oklahoma the pace-setter in the adoption and general acceptance of a national standard claim form," Doctor Woodard reported. "Copies of Oklahoma's solution to the claim form problem will be mailed to major insurance companies in the United States as well as to the Health Insurance Council and the American Medical Association." he added.



New Engles Clinic Is Opened in Durant

The new $75,000 Engles Clinic in Durant was formally opened on Sunday, April 13. The modernistic building is constructed of dark red brick. A continuous strip of glass joins wall and roof. The sliding doors are of birch paneling mounted on aluminum frames and are so constructed that they can be dismantled and the panels replaced should a change in atmosphere be desired.

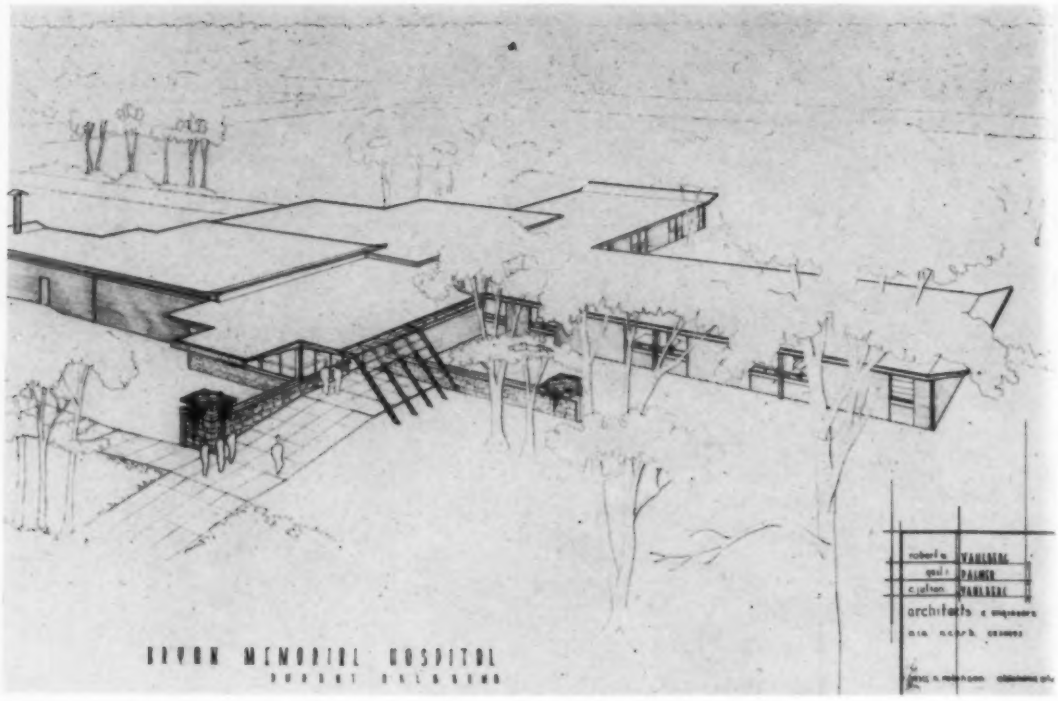
The building houses three suites of offices with consultation room and two treatment rooms in each suite. In addition, there is an emergency room for minor surgery and for x-ray and laboratory work. The east wing of the building houses a separate pediatric and obstetrics waiting room.

Taking full advantage of the beauties of nature, a cherry laurel tree highlights an interior court around which the offices and examining rooms are built. Overhead is a huge plastic sky dome which provides natural lighting for the rock garden. It is one of three natural beauty spots featured in the structure. An exterior court is located just east of the pediatric and obstetrics waiting room.

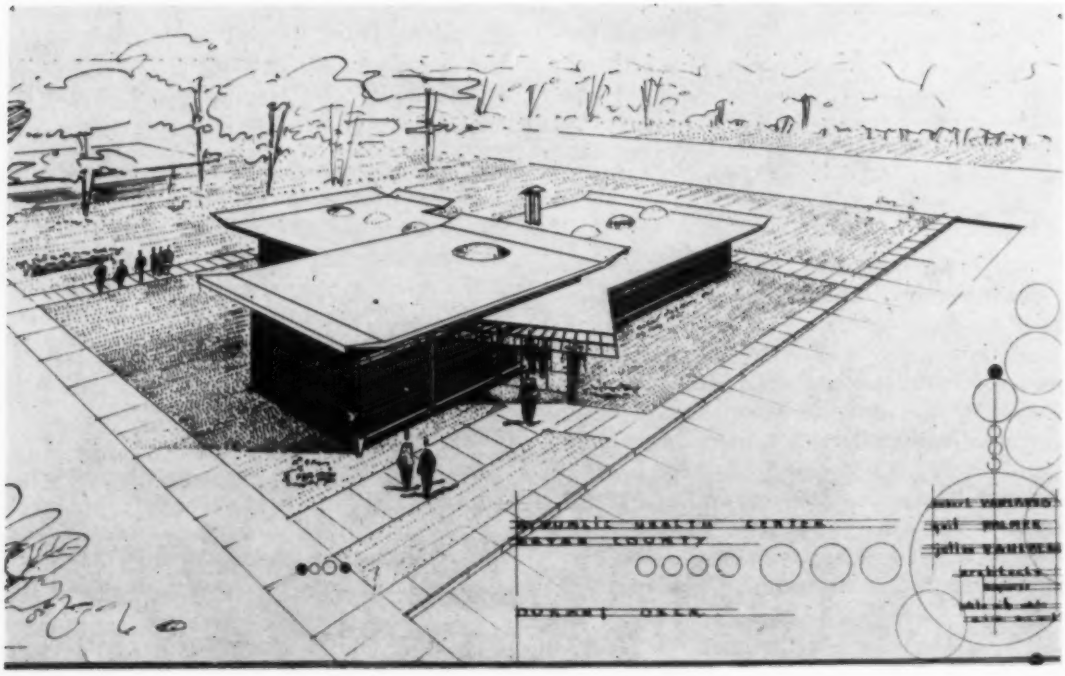
Floors of the building are of asphalt tile. Recessed fluorescent lighting fixtures supplement the natural light which is provided by the glass strip. Primary colors are used for a color scheme for the interior of the building. The central heating and air conditioning are installed with underground ducts. An intercommunications system is installed in all offices.

LeRoy Engles, M.D., Robert Engles, M.D., and Estelle Engles, M.D., have offices in the clinic.

Architects for the building were Vahlberg, Palmer, and Vahlberg, Oklahoma City.



BRYAN MEMORIAL HOSPITAL



BRYAN COUNTY HEALTH CENTER

Bryan Memorial Hospital and County Health Unit Opened in Durant

Climaxing an eight-year effort to obtain expanded medical facilities for southeastern Oklahoma, the Bryan Memorial Hospital and county health unit was opened April 12. The $700,000 structures were paid for by a bond issue and matching federal money. Both structures are pictured on the facing page.

The hospital is, roughly, "X" shaped, with most of one side filled in. The entire structure is on one level with exception of a semi-submerged mechanical room containing boilers, air conditioning machinery, blowers, electrical control panels and a stand-by electrical generator.

The most striking feature of the new buildings is the variety of colors used throughout. Soft pastels to bright scarlets can be found on the interior where 34 different shades of paint were used.

The two patient wings have a total of 22 rooms, each with a plug-in outlet from the central oxygen supply. Telephones are installed in each room and most of the rooms have built-in television sets, complete with bedside remote controls. Charges for the rooms will range from $8.50 to $14.00 per day.

The health unit consists of examining rooms, nurses' work room, X-ray room, storage room, a room which will be used for a laboratory when equipment is available, records room, offices for the staff and a conference room.

The brick structures have pagoda type roofs and are equipped with central heating and air conditioning. Both buildings were designed by Vahlberg, Palmer and Vahlberg, Oklahoma City architects.

Sixteen Make Hall of Fame

Sixteen laymen were recently inducted into the newly-formed Oklahoma Medical Sciences Hall of Fame. Created by the University of Oklahoma Medical School Alumni Association, the Hall of Fame will exist for the sole purpose of honoring Oklahoma Citizens, other than members of the medical and allied professions, who have contributed much to the advancement of medical sciences and medical movements of a progressive nature.

Ceremonies were held at the Oklahoma Medical Research Foundation. A. B. Smith, M.D., Stillwater, President of the Alumni Association, presented the awards to the group. Photographs of those honored will be hung in the passageway connecting the Research Foundation and the Medical School.

According to Carl H. Bailey, M.D., Stroud, President-Elect of the group, only a few such awards will be added to the roster each subsequent year.

Recipients of the award were: John Rogers, Tulsa attorney; William K. Warren, Tulsa oilman; Mrs. Rose S. Woodworth, Ardmore; Rep. James M. Bullard, Duncan; Dr. George L. Cross, president of the University of Oklahoma, Norman; Ancel Earp, Oklahoma City insurance man; Governor Raymond Gary, Madill; Sen. Roy E. Grantham, Ponca City; Paul Harkey, Oklahoma City attorney; Jim Lookabaugh, state commissioner of public safety, Oklahoma City and Dean A. McGee, Oklahoma City oilman.

AMA Pamphlet on Driver Fitness

Before taking the wheel, every driver should check to make sure that he's fit to drive. Under certain circumstances—outlined in a new American Medical Association pamphlet—a driver can be a dangerous hazard on the road. "Are You Fit to Drive?" urges drivers to contact their physicians if they are in doubt about their fitness.

For distribution through physicians' offices, the booklet currently is available from the Association of Casualty and Surety Companies, 60 John Street, New York 38, N.Y. Price is $4.60 per 100 copies, regardless of quantity.

25 YEARS AGO

Articles published in *The Journal* of the Oklahoma State Medical Association May, 1933.

SOME PROCTOLOGIC PROBLEMS

Curtice Rosser, M.D., F.A.C.S.
Professor of Proctology,
Baylor University College of Medicine, Dallas, Texas

. . . Essential Surgery in Chronic Ulcerative Colitis

"The management of a widespread, disabling, often fatal disease, chronic ulcerative colitis has been in the last ten years almost entirely relegated to the realm of medical treatment. Two factors conspired to bring this about. The mortality following operative interference in the past had been unusually high, due to the fact that surgeons did not understand the extreme permeability of a bowel carrying this infection and attempted to explore all cases, peritonitis frequently resulted from trauma, and to the fact that the preoperative and post operative preparation was not properly emphasized. When the announcement was made that the disease was due to specific organisms and that vaccines and sera made from these organisms would cure the condition, the surgeon was glad to relinquish his attempts to combat the situation by radical means, and for ten years had waited patiently to see the outcome of purely medical measures.

"Four definite etiological agents have been postulated by different groups of observers and each group seems equally convinced of the adequateness of their explanation and the complete efficacy of measures based on it. One group has claimed that all cases are due to amebae. In England and Canada the theory that the disease is related to bacillary dysentery has gained foothold, anti-dysentery serum being used. It has also been postulated that chronic ulcerative colitis was primarily due to an avitaminosis.

"Unquestionably the most popular theory in this country is that first enunciated by Bargen in 1924, that the disease is the result of infection of the colon with a specific streptococcus and that vaccines and sera from this organism are largely curative.

"It would appear that regardless of the final outcome of the discussion concerning the specificity of any etiological agent, and granting the value of recent discoveries, the result of treatment by present methods are nevertheless unsatisfactory. Surgical measures which have been in a large part held in abeyance have a wide field of usefulness which should be utilized. Such surgical procedures, which can be held to a lower mortality by proper application of new information concerning the pathology present will be useful in three ways; the cure of disease, to cure the patient, if not the disease, to eradicate foci of infection in the zone of the origin (the anal canal) as well as in distant zones. . . ."

EDITORIAL NOTES — PERSONAL AND GENERAL

"Muskogee County Medical Society met April 10th and the following program was presented:

" 'Ano-Rectal Fistulae,'—R. L. Murdock, Oklahoma City.

" 'Diseases of the Liver and Biliary System from the Medical Standpoint with Special Reference to Present Day Diagnostic Procedures'—N. P. Eley, Oklahoma City.

" 'Head Pains Due to Eye Strain'—Forrest S. King, Muskogee.

" 'Pertinent Points on Muskogee County Medical Society and Its Relationship to Its Membership and Organized Medicine'—C. E. White, Muskogee. . . ."

Transthoracic Extrapleural Approach

(Continued from Page 251)

posterior parts of the wound in order to prevent peritoneal or pleural perforation. The ureter is cut and ligated and the kidney freed from the wound. Then the aorta and vena cava are dissected free from all extraneous tissue, including nodes.

The wound is closed by approximating the diaphragmatic attachments previously severed. The pleura and peritoneum are searched carefully for tears. If an opening has been made into the pleural cavity a catheter is inserted into the chest; after the skin has been closed the lung is expanded by the anesthetist and the catheter removed. This procedure serves as prophylaxis against a pneumothorax. As a rule the catheter is not left in the chest for postoperative decompression. The wound is closed in the usual manner in layers, with or without drain to the kidney bed.

The postoperative course of patients undergoing this procedure has been good. There have been no serious postoperative chest or abdominal complications.

Summary

Nephrectomy for cancer of the kidney is often difficult because of inadequate surgical exposure. The use of a technique whereby the kidney is widely exposed through an eleventh rib incision enables the surgeon to remove the kidney with its fascial structures intact, without invading either the chest or the abdominal cavity.

Read at the annual meeting of the Oklahoma State Urological Association, Fort Gibson, Oklahoma, May 3, 1957.

REFERENCES

Woodruff, M. Journal of Urology, Vol. 73, pgs. 183-188, 1955.

1200 N. Walker, Oklahoma City, Oklahoma.

Deaths

GORDON DARNALL WILLIAMS, M.D.
1901-1958

Gordon Darnall Williams, M.D., 57 year-old Weatherford physician died at his home on April 3, 1958. A native of Weatherford, Doctor Williams had spent his entire life there, except for the time he was in school and in the United States Air Force.

Doctor Williams received his degree from the University of Oklahoma School of Medicine in 1927. After his internship at Polyclinic Hospital in New York City, he returned to Weatherford to assume the practice of his father, the late J. J. Williams, M.D.

Doctor Williams was a member of the Oklahoma State Medical Association and the American Medical Association.

CLAUDE MALCOLM COCHRAN, M.D.
1891-1958

Claude Malcolm Cochran, M.D., Okemah physician, died March 18, 1958. He had practiced in Okemah since 1925.

Born in Neosho Falls, Kansas, Doctor Cochran later graduated from the University of Illinois School of Medicine in 1922.

A Life Membership in the Oklahoma State Medical Association was awarded Doctor Cochran in 1957. He was also a member of the Okfuskee County Medical Society, the Southern Medical Association and the American Medical Association.

O. I. GREEN, M.D.
1878-1958

O. I. Green, M.D., 79-year-old Bartlesville eye, ear, nose and throat specialist, died in Sand Springs, April 4, 1958.

Doctor Green was born in New Windsor, Illinois on November 30, 1878. After seven years of teaching school in Illinois and Oregon, he entered medical school and received his degree from the Illinois School of Medicine in 1912.

In 1916, Doctor Green came to Bartlesville where he continued his practice until January of this year when he retired.

Doctor Green was a member of the Oklahoma State Medical Association and the American Medical Association.

Have You Heard?

THOMAS C. POINTS, M.D., Oklahoma City physician, has been elected president of the Oklahoma City Lions Club, which is the eighth largest club in Lions Club International. Doctor Points will take office July 1.

C. A. TRAVERSE, M.D., Alva physician and surgeon for nearly 24 years, became a fellow in the International College of Surgeons last month at the 11th biennial meeting of the World Federation of General Surgeons and Surgical Specialists in Los Angeles.

FRANK L. FLACK, M.D., Tulsa physician, has been named Tulsa County's Physician of the Year. The award was made by the Tulsa County Medical Auxiliary at special ceremonies on March 29. The 70 year-old physician came to Tulsa in 1928 after practicing in Coffeyville, Kansas.

LEROY A. WOLEVER, M.D., Drumright, has moved into his new clinic, located at the corner of Drumright and Ohio Streets. The new clinic was constructed from two former residential houses which were joined. It consists of a waiting room, the doctor's office, X-Ray and dark rooms, examining room, treatment room and a room for minor surgery.

HERBERT KENT, M.D., Associate Professor, Department of Physical Medicine, University of Oklahoma School of Medicine, will present a paper entitled "Rehabilitation Potential in Quadriplegic Teenagers" to the Section on Physical Medicine and Rehabilitation at the Annual Meeting of the American Medical Association on June 25 at San Francisco.

PHYSICIAN PLACEMENT

General Practice

Clyde R. Danks, M.D., 4780 Easley Street, Millington, Tennessee, age 29, married, graduated from University of Louisville, 1955. Will be available mid-August, 1958 upon completion of military service.

Sam Davis, M.D., 1605 N.E. 38, Oklahoma City, age 33, married, graduated from University of Oklahoma School of Medicine, 1956, veteran, will be available July 1, 1958.

Archie Neal McIntyre, M.D., 138 LeHardy Dr., Savannah, Georgia, age 28, married, graduated from Louisiana State University School of Medicine, 1955. Will be available November 3, 1958 upon completion of military service.

General Surgery

Duane H. Dougherty, M.D., 201 Avon Road, Tonawanda, New York, age 30, married, veteran, New York University 1953, board qualified, will be available July, 1958.

Charles Edward Selah, M.D., Huey P. Long Charity Hospital, Pineville, Louisiana, age 31, married, will complete board requirements in June, 1958, veteran, graduated from Tulane 1951, will be available July 1, 1958.

Ralph L. Hopp, M.D., 338 E. Kingsley, Ann Arbor, Michigan. Married, veteran, Board Certificate held in General Surgery. Graduated Indiana University, 1950, will be available July 1, 1958.

Francis Patrick Lamb, M.D., 6426 Evergreen, Berkeley 21, Mo., age 35, married, veteran, graduated from St. Louis University in 1951, Diplomate American Board of Surgery, will be available July, 1958.

Locum Tenens

Jack David Shirley, M.D., 430 Bellevue, Lafayette, Louisiana, age 27, married, will be inducted into U. S. Navy, October 6, 1958, graduated from University of Oklahoma in 1956, would like position for three months doing general practice. Will be available July 1, 1958.

Neurosurgery

Bahif S. Salibi, M.D. (Currently Captain, MC U. S. Army) 121 Evac. Hosp., APO 971, San Francisco, California, age 35, married, Harvard, 1950, Board qualified in Neurosurgery, except for the two years of private practice required by the Boards, available October, 1958.

Obstetrics & Gynecology

Herbert Claiborne Jones, M.D., Jr., Box 166, University Hospital Charlottesville, Virginia, age 30, married, University of Virginia 1951, finishing board qualifications, will be available Spring, 1958.

Orthopedic Surgery

H. N. Hamilton, M.D., 13 Evergreen Road, Little Rock, Arkansas, age 36, married, veteran. Johns Hopkins, 1945, finishing Orthopedic Residency July 1958 and will be available at that time.

Thoracic and Cardiovascular Surgery

Wayne E. Hird, M.D., McGuire VA Hospital, Richmond 19, Virginia, age 31, married, Korean veteran, University of Kansas 1950, Board qualified in General Surgery, Thoracic and Cardiovascular exams will be completed by next July. Will be available July, 1958.

James L. Russell, M.D., Charity Hospital of La., New Orleans 12, La., age 30, veteran, graduated from University of St. Louis 1949, Board certified in General Surgery, Board qualified in Thoracic and Cardiovascular. Will be available August, 1958.

CLASSIFIED ADS

FOR SALE—Used, Complete 100 M.A. G E X-Ray Fluoroscopy Unit with Bucky Tank. Excellent condition. $1,250.00, terms, discount for cash. W. A. Waters, M.D., 4926 E. 21st Street, Tulsa.

PHYSICIAN WANTED, State Veterans Hospital, Sulphur, approx. $900 per month plus other benefits. Contact C. E. Bates, M.D., Box 200, Sulphur, phone 851.

CLINIC LOANS: If you are planning to build a clinic, and need to secure financing, call Pat Allen, WI 2-2402 or write 1201 Classen Dr., Oklahoma City.

FOR SALE: Attractive business building, furnishings and equipment. Close by downtown Tulsa. Building is six years old and in good condition. Now being used by two physicians. Other new buildings recently erected close by. Available by July 1, 1958. 1321 South Main or call LUther 4-2481 in Tulsa.

GENERAL PRACTICE FOR SALE: Good general practice for sale; completely equipped new office; ground floor. County Seat town 3,000, 25 bed local hospital, gross $30,000. Wonderful for general surgeon. Will sacrifice. Southeastern Kansas. If interested write Key A, c/o THE JOURNAL, P. O. Box 9696, Shartel Station, Oklahoma City, Oklahoma.

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